Beginning Its 31st YEAR

NOVEMBER, 1954

Industrial FINISHING

Published Monthly in the interest of Product Cleaning and Painting by Practical Publications, Inc., 1142 N. Meridian Street, Indianapolis 4, Ind.

They're such nice people to do business with

...That's one of the simplest, yet nicest compliments we've ever earned

Modestly enough, we like to hear customers say things like that about us. In fact, we love it!

Call it good public relations, or just good business practice, but we at Lilly work at it—in every way—to develop and keep customer confidence. We want them to keep on saying:

"THEY'RE SUCH NICE PEOPLE TO DO BUSINESS WITH"

LILLY VARNISH COMPANY
666 S. CALIFORNIA STREET
INDIANAPOLIS, INDIANA

Serving industry with all types of product finishes and coatings:
VARNISHES • LACQUERS • ENAMELS
METAL LITHO COATINGS • STAIN and WOOD FILLERS

Can you name...

A Hotter Spot for a Cooler Finish?

Few applications offer a greater challenge to an industrial finish than a refrigerated beverage dispenser.

Subjected to the ravages of sun, wind, rain, ice, snow, and spillage, exposed to hands that are soiled with dirt, grease and perspiration, banged with tools or bottles, kicked by careless feet,—these rugged silent salesmen must be prepared for dangerous living.

And they must be beautiful as well. Frequently their color is their trademark—a visual reminder to "step up and buy." Thus permanence of color and retention of gloss are exceedingly important.

These are the reasons why leading manufacturers of beverage dispensers protect and adorn their product with

POLYMERIN... *the original speed-bake finish*

Do you have a similar problem involving beauty and rugged durability? Then call your nearest IC Finishes specialist for further details.

Interchemical Corporation
Finishes Division

FACTORIES: CHICAGO, ILL. • CINCINNATI, OHIO • ELIZABETH, N. J.
LOS ANGELES, CAL. • NEWARK, N. J. • MEXICO CITY, MEX.

In Canada, IC products are sold by AULCRAFT PAINTS LTD., Toronto, Ont., under its trademarks.

one of a series of advertisements on . . .

John L. Armitage and Company

organic finishes for industry since 1876

THE YEAR 1876 was the era of the Clipper Ship, General George Custer and the Sioux at the Little Big Horn. It was 1876 when John Armitage established his son, John L. Armitage, in the varnish business in Newark, N. J.

Old John had come from England with processes for manufacturing table oilcloth, and at the time of the Civil War hundreds of knapsacks were made of this material. With the precious varnish formulas handed down from father to son, young John L. Armitage started his new business.

Varnishes were made for linoleum, oilcloth, furniture and pianos. With the coming of new techniques in metal fabrication and more particularly, the introduction of mass production in the automobile business, the little company branched into the field of black japan and baking enamels. It became one of the pioneers of new finishes for the automobile industry. Four sons of the founder expanded and diversified the business into a general line of industrial product finishes.

Today, with a host of new resins, pigments and other raw materials, the Armitage Company makes all kinds of organic finishes for industry. We are neither the largest nor the smallest manufacturer in this field. What we do have, and that which we are proudest of, is a skill, a pride, and a knowledge of our trade. It is this pride in our products, and the confidence of our customers that has kept this business going under family management for more than 78 years.

We hope to tell you about some of our products and some of our skills in these pages through the months to come.

JOHN L. ARMITAGE ARMORCOID & CO.

Synthetic Enamels, Paints, Varnishes, Lacquers

245 THOMAS STREET · · · NEWARK 5, NEW JERSEY

The finish has to be good on this *John* BEAN FIRE FIGHTER

John Bean's Industrial High Pressure Fog Fire Fighter is rugged and efficient. It must remain efficient under emergency conditions of wear, heat and moisture. That's why the protective finish has to be good, and that's why John Bean uses a finish custom created for the job by our specialists.

The Better the Finish, the Better the Buy

GRAND RAPIDS VARNISH CORPORATION

MAKERS OF THE FAMOUS Guardsman® FINISH AND Guardsman® CLEANING POLISH

GRAND RAPIDS, MICHIGAN

NOVEMBER, 1954
Vol. XXXI, No. 1

BPA

A monthly magazine for company executives, production superintendents, process engineers, chemists, purchasing agents, paint shop and finishing department foremen of industrial plants where product surface cleaning and painting are major operations in the manufacture of parts and products of all kinds.

Industrial FINISHING

W. H. ROHR, Editor P. C. BARDIN, Associate Editor

Contents

Random Comment on the Industrial Scene 4
Finishing TV Masks 26
Finishing Wood Tables 40
Painting Wheel Rings for Automobiles 50
Paint Users' Tests; Be Fair; Get Results 56
Technique of Handling Color Flecked or Multicolor Finish 74
Letters from Readers 80
Questions and Answers 88
Materials; Supplies; Equipment 98
Booklets; Circulars; Catalogs 110
Editorial 116
Classified Advertising Department 125
Advertisers Index 128

Glidden Expands in Canada .. 30
Economical Operations of Convection Batch Ovens 32
Wrinkle Over Wrinkle 36
Lea-Michigan, Inc. at Detroit; Another Finishing Specialist 37
Wash Primers 38
Merriman Represents Whitfield 39
United Lacquer Opens Sales Office in St. Louis, Mo. 39
New Jones-Dabney Building in Louisville, Ky. 44
"Furniture Shop Blues" 44
Colored Flock Shows Air Flow Pattern 48
Conveyor Lubricators 70
Instant Floor Patch 70
O'Brien Corp. Buys Goldberg Paint Co. In S. F., Calif. 78
Engineered Spray Booths 86
Research Products Corp. Names District Sales Mgr. .. 90
Special Buff Catalog 90
Wm. Beacham Opens Engineering Office, Testing Lab. ..114
Rollacoating Cuts Cost of Finishing Plywood Panels 114
"Organic Coating Technology" 115
Nat'l. Chemical & Plastics Co. Featured in "Oilways" 118
Airless Spray Painting Clinic ..121
Fast Dry Touch-up For Any Color Wrinkle 124

Published
the 18th of each month by
PRACTICAL PUBLICATIONS
Incorporated
1142 N. Meridian St.
Indianapolis 4, Ind.
Telephone MElrose 5-6771

President ..... W. H. Rohr
Vice-President ..... E. A. Dosch
Sec.-Treas. ..... R. E. Salts

Eastern Representative:
C. A. LARSON
254 West 31st St.
New York 1, N. Y.
Phone: Longacre 4-4285
4-4286

West Coast Representative:
SIMPSON-REILLY LTD.
Halliburton Building
Los Angeles 17, Calif.
Telephone: Dunkirk 8-1179
814 Central Tower
San Francisco 3, Calif.
Telephone: Douglas 2-4994

Subscription Rates Per Year
U. S. and Possessions $3.00
Canada and Foreign $5.00

Acceptance under Section 34.64, P. L. & R., authorized

31 THIRTY-FIRST YEAR OF PUBLICATION

Heat Pump. The heat pump is a completely self-contained system which, without water or flame, provides warm filtered air in the winter and cool, dehumidified air in the summer.—Westinghouse Electric Corp.

* * *

Typewriter Color. The old black typewriter is a thing of the past. One new model comes in a soft brown color with green keys; and an electric typewriter is now available in five attractive two-tone color combinations with glare-free keys.—*Dyelines and Bylines.*

* * *

Non-Spill Paint. "Breeze Drip-Less" by Superior Paint & Varnish Corp. is guaranteed not to spill, splash or splatter. Secret lies in controlled flow. The paint is a semi-solid that liquifies when the brush or roller contacts any surface to be painted. For home decorators; ordorless; washable. An alkyd base; 12 basic colors and 36 combination shades and white.

Clean painting; it doesn't drip or splatter.

* * *

Automatic Finishing. The trend is definitely toward automatic finishing systems. Reasons are obvious: to reduce costs and to either increase or at least to stabilize production.

In some plants a fully automatic system may not be feasible, but perhaps certain operations can be converted to advantage. Of course, some methods will have to be changed. Through study and research both materials and methods have been greatly improved in the past decade.

It may be well to explore the possibilities in your plant.

* * *

Magnesium Corrosion Resistance. Magnesium, one of the modern metals with great potential, has been restricted to a degree in its application because of its susceptibility to some corrosion.

There now appears to be a solution to this problem through a new impregnating process which has increased the metal's resistance to corrosion from 300 to 400%. Tests were recently conducted by different testing laboratories in Los Angeles using both magnesium alloy castings and sheet. Impregnated samples were sub-

THIS is IT!!!

DOLVAR

BURN RESISTING

AIR DRY OR BAKE

WATER WHITE

• You will be hearing a lot about this new, outstanding catalyzed, clear synthetic finish for wood. High in solids. It is so tough you can't knock it off with a hammer! A burning cigarette will not even blister or mark it after two or three minutes. Positively will not cold-check, print, soften or pad-mark. Withstands alcohol, water, nail polish, lacquer thinners, etc.

NON-YELLOWING!!

Order a drum today—with a positive guarantee of satisfaction!

"From the start consider the Finish"

V. J. DOLAN & COMPANY, Inc.

Manufacturers of *"Unquestionable Quality"*

INDUSTRIAL FINISHES

1830 N. Laramie Ave. Chicago 39, Ill.

BErkshire 7-0100

Flame-proof PEEL FILMITE snuffs out flame.. ordinary plastic booth coating supports it

PHOTOGRAPHIC PROOF THAT PEEL FILMITE IS SAFE FOR PAINT SPRAY BOOTH MAINTENANCE. Here's a true and dramatic flame test —visual demonstration in safety for paint spray booth operation. While ordinary plastic coat sealer bursts into dangerous flame, DuBois' new *Flame-Proof* PEEL FILMITE simply *snuffs out* the lighted match. Here's an important safety factor, a complement to PEEL FILMITE's smooth, opaque white coating . . . its ease of spraying on—ease of peeling off . . . *plus the man hours saved in booth clean-up.*
Write for descriptive folder. Learn how to save "good hard dollars" on spray booth maintenance.

SPRAY ON. PEEL FILMITE sprays on evenly, forms a smooth, white opaque coating that dries quickly. Non-greasy surface reflects light, resists gasoline, alcohol, fats, acids, alkalis.

PEEL OFF. Peels off in sheets like the skin of a tangerine. *Spray booths are actually cleaned in minutes, not hours.* PEEL FILMITE eliminates messy hand scraping.

The DuBOIS Co., Inc.

Dept. F, Cincinnati 3, Ohio • Los Angeles 33, Calif.

DuBois Warehouses and Representatives Are Located Coast-to-Coast

jected to continuous salt spray for periods up to 125 hours with no evidence of pitting or metal failure.

Magseal, as the new process is called, was developed by the Nu-Line Plastic Impregnating Co. of Los Angeles after two years of research. This new process may prove to be an important step in furthering the use of both magnesium sheet and castings in modern industrial design and production.

* * *

Better Headlamps. A new, brighter, sealed-beam automobile headlamp, designed to increase visibility in clear weather, but especially in rain, snow, fog, and dust, has been brought out by the General Electric Co. As a result . . . . driving at night and in poor-visibility conditions is expected to be both safer and easier for American motorists.

* * *

A Non-Sticking Bandage has been developed. This new gauze bandage called "Telfa" may be removed from a healing wound without sticking or damaging the healing tissue.

The base of this dressing is an unwoven web of highly absorbent cotton fabric to which is sealed a non-wettable film. The film is perforated with holes large enough to permit rapid permeation of the bandage, but small enough to keep out granulating tissue which causes ordinary bandage to stick to the wound. The film side is applied to the injury.

* * *

Wasting Water. George Waters, writing in Finishing Touches, the publication of National Federation of Metal Finishers, Inc., calls attention to our waste of 85% of the available water supply.

Today, expanding industry uses more water than agriculture. By 1975 it is estimated that it will consume

2
QUALITY
LACQUERS
manufactured by
SCHWARTZ
CHEMICAL CO.
REZ-N-LAC
for STYRENE
NON-
TOXIC
VINA-PLAS
LACQUER
for VINYLS
SUPERIOR ADHESION
NON-CRAZING
FAST DRYING
REZ-N-LAC, for styrene, is a fast drying, high gloss enamel which is non toxic, non crazing and can't scratch off.
VINA-PLAS brings high lustre to vinyls and plastisols. Air dries in 5 minutes. Excellent adhesion. Easy to apply. Both products come in a wide range of colors. 1, 5, & 55 gallon sizes.
For descriptive literature write
Schwartz
CHEMICAL CO., INC.
328 W 70th St., New York 23, N. Y.

I-SIS can serve you better!

Lowest Overhead

in the industry...
Makes it possible
for us to quote you ...

Lowest Prices

for guaranteed
quality. Laboratory
controlled industrial
finishes. Phone or write us.

LACQUERS • THINNERS
INDUSTRIAL FINISHES

I-SIS CHEMICALS Inc.
SPRINGDALE, CONNECTICUT
Phone Stamford 4-7306

two thirds of all fresh water in this country.

Two examples are eye openers. To refine one barrel of oil requires 770 gallons of water. To produce one ton of rolled steel requires 110,000 gallons of water. Add to this all of the other industries such as chemicals, plastics, food processing, etc., and you will have a conception of industry's needs.

It looks like a fresh water conservation program is long overdue.

* * *

Heat Resistant Plastic. Agilene-HT is the name given ordinary polyethylene that will withstand heat as high as 350° F. This is accomplished by subjecting it to a bombardment of sub-atomic particles of high energy.

This development is important to industry in that it extends the use of polyethylene in the food, chemical and electrical fields, as well as for laboratory ware, small vessels, and a wide range of custom fabrications.

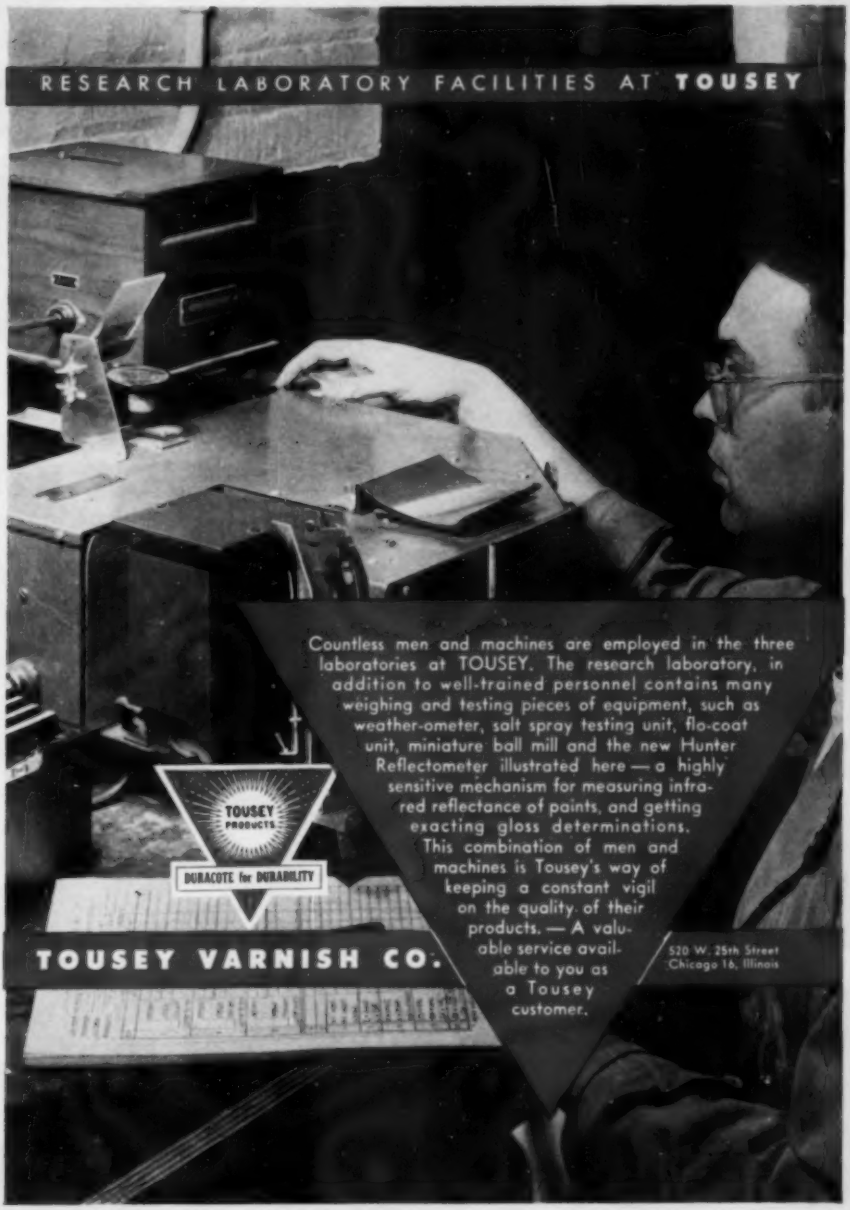
* * *

Pattern Lumber. Corisa is the name of a specie of wood adapted especially to pattern making. It is lighter than pine, but equally as strong. Being free of pitch, it holds its shape better than pine, remaining dimensionally stable under adverse conditions.

It planes and sands easily with the grain or end grain, carves well and takes coatings readily. It is graded just like mahogany, according to National Hardwood Association rules.

* * *

Aluminum Auto Parts. Performance tests of new applications of aluminum in automobile construction are being conducted by technical and development engineers of Harvey Aluminum. The majority of the new uses concern chassis and frame modifications.


RESEARCH LABORATORY FACILITIES AT TOUSEY
Countless men and machines are employed in the three laboratories at TOUSEY. The research laboratory, in addition to well-trained personnel contains many weighing and testing pieces of equipment, such as weather-ometer, salt spray testing unit, flo-coat unit, miniature ball mill and the new Hunter Reflectometer illustrated here — a highly sensitive mechanism for measuring infra-red reflectance of paints, and getting exacting gloss determinations. This combination of men and machines is Tousey's way of keeping a constant vigil on the quality of their products. — A valuable service available to you as a Tousey customer.
TOUSEY PRODUCTS
DURACOTE for DURABILITY
TOUSEY VARNISH CO.
520 W. 25th Street
Chicago 16, Illinois

Dual

Cincinnati

FINISHING SYSTEMS

AUTOMATIC PAINT DIP and CHROMODIZER OPERATIONS:

1. Alkaline Clean
2. 1st Rinse
3. Passivate
4. 2nd Rinse
5. Hot Air Blow-Off
6. Paint Dip
7. Oven Bake
8. Stripper \ For empty con-
9. Rinse / veyor hangers.

save 60% in time

... for noted aircraft manufacturer

A double conveyor line cleaning and paint finishing system in a well known mid-western aircraft plant handles all sorts of formed aluminum parts up to 15" x 20" in size. Moving at 18 feet per minute, the conveyors carry the parts through the various operations, removing grease, oil and chips prior to painting and assembly.

Among interesting design features: The arrangement of the system around the outer perimeter of the room, leaves the center clear for storage and loading and unloading operations. The zinc chromate dip tank has a refrigeration system to maintain tank temperature at 74° F., reducing evaporation of volatiles. The system is protected with CO_2 equipment and automatic paint tank dump.

As was done in this installation, Cincinnati Engineers will gladly design equipment to suit your needs. Whatever your cleaning or finishing problems, a survey costs you nothing, may point the way to substantial savings. Write today for booklet: "Finishing Systems."

Cincinnati

CLEANING & FINISHING MACHINERY CO., INC.
2006 HAGEMAN STREET, SHARONVILLE, OHIO

always a winner!

Korolite FINISHES

in Flamboyant colors!

Developed by Illinois Paint Works for the NATIONAL AFFILIATES. These flamboyant KOROLITE Finishes are available in many exciting colors. They are tough, mar resistant, durable finishes which will give a lasting sales appeal to your product.

NATIONAL AFFILIATES

ILLINOIS PAINT WORKS
Chicago, Ill.

PACIFIC PAINT & VARNISH CO.
Berkeley, California

BENJAMIN FRANKLIN PAINT & VARNISH CO.
Philadelphia, Pa.

DeSOTO PAINT & VARNISH CO.
Garland, Texas

CAROLINA PAINT & VARNISH WORKS
Greensboro, N. C.

ILLINOIS PAINT WORKS

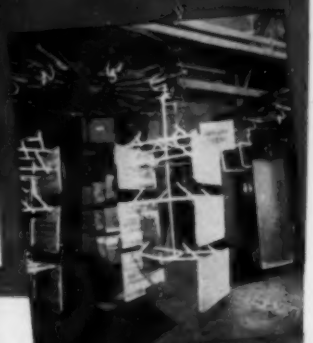
1034 South Kostner
Chicago 24, Illinois

ILLINOIS INDUSTRIAL FINISHES PAINT WORKS

NATIONAL AFFILIATES NAFTEK INDUSTRIAL FINISHES

PRODUCTION INCREASED 150% with DESPATCH FINISHING SYSTEM

5-stage washer includes: alkali cleaner, hot water rinse, zinc phosphatizing, cold water rinse, chromic phosphoric acid rinse.



Amana

World's Largest Manufacturer of Food Freezers Expands

As part of a major expansion program Amana Refrigeration, Inc., Amana, Iowa, installed a DESPATCH 2-coat, 2-bake electrostatic paint finishing system with a capacity of 400 freezers and 200 room air conditioners on an 8-hour shift. The new streamlined system is credited with increasing Amana's production by 150%, has greatly improved finish quality and has achieved substantial paint savings through more efficient paint application and paint reclamation processes.

Ware travels on a 2700-foot continuous conveyor through 5-stage washer, dry-off oven, prime and finish staggered electrostatic spray booths, prime and finish touch up booths, prime and finish multiple pass bake ovens and inspection area to three assembly lines.

A COMPLETE SYSTEM OR A SINGLE UNIT

Despatch Finishing Systems are designed and built to finish your product better, faster and more economically. You can get a complete system or an individual unit. Write, Wire or Call Dept. E for details.

DESPATCH OVEN COMPANY

Minneapolis Office
619 S.E. 8th St.

Chicago Office
4534 N. Broadway

Sales and Service in all Principal Cities

PIONEERS IN ENGINEERING HEAT APPLICATIONS FOR INDUSTRY

NEW!

NCP

NCP Water White Lacquer #51 *PROVES* Amazing Color Retention In Actual Tests!

We took two raw wood panels and applied a white undercoat. We coated the first panel completely with another leading Water White Lacquer, the second completely with NCP Water White Lacquer #51. We placed both panels in the sunlight; the top half of each panel was covered with aluminum foil to prevent exposure to light, leaving the bottom half open to exposure. Here's what happened:

This half coated with other leading Water White lacquer and not exposed to light.

This half coated with other leading Water White lacquer and EXPOSED to direct sunlight. **Yellow discoloration occurs.**

This half coated with NCP Water White Lacquer #51 and not exposed to light.

This half coated with NCP Water White Lacquer #51 and EXPOSED to Direct Sunlight. **COLOR RETAINED.**

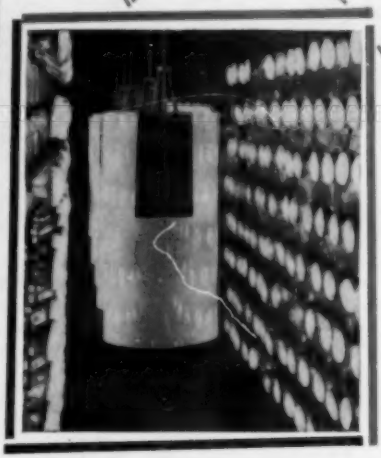
PROOF! Where New NCP Water White Lacquer #51 is used, Original color is retained; the quality of your product is assured.

To ASSURE MAXIMUM COLOR RETENTION Use NCP Water White Lacquer #51

The National Chemical & Plastics Co.
1422 Philpot Street Baltimore 31, Md.

Write For Details of new improved NCP Water White Lacquer #51.

30 MINUTES



TOUGH FINISH

... on tough time schedule!

Tough finishes are not tough problems—with unlimited time for baking or curing. When extremely fast baking schedules must be met, however, it takes an outstanding material to produce the long-lasting mar-resistance demanded for hot water heaters such as the Rex Heater, produced by The Cleveland Heater Co.

Thanks to Sherwin-Williams KEMCLAD® Appliance White, a total time cycle of 30 minutes is maintained in finishing these jacket exteriors from bare metal, through automatic, electrostatic spray equipment and infrared oven, to finished jackets ready for assembly. Resulting finish has high hardness with flexibility . . . lasting gloss and washability . . . withstands heat without discoloration.

If greater toughness, or faster baking — or BOTH — are properties you can use, it will pay you to investigate KEMCLAD. Call, wire or write: The Sherwin-Williams Co., Gen. Ind. Div., Cleveland 1, O.

SHERWIN-WILLIAMS
Industrial Finishes

Having hard-to-track-down finishing problems? Maybe it isn't the fault of the stain, nor of the filler. Maybe it isn't the sealer, nor the top-coats, either. Maybe it's the *combination* of several unrelated materials, each excellent, from several suppliers!

Many of today's most troublesome and difficult-to-trace finishing problems are caused by seemingly compatible materials that don't *stay* compatible after products are finished. And the cause of the problem can't easily be ascribed to any one material or source.

That's why, more and more, manufacturers find it pays to be *sure*, with *related* finishing materials for the *whole* system from *one* dependable source. From stain to finish coats, Sherwin-Williams Furniture Finishes provide a single source for all the materials needed in any system. No question how materials will react with each other with aging or exposure. Relationships of formulations are known . . . results assured. Ask for recommendations on your requirements.

And check, too, on the help and experience Sherwin-Williams can offer you on color-styling your lines in keeping with latest color trends. Call, wire or write The Sherwin-Williams Co., General Industrial Division, Cleveland 1, Ohio.

SHERWIN-WILLIAMS

Industrial Finishes

Zatex®

Multi-color enamels

A marvelous new finish idea . . . smart patterns in two to four colors in a single application!

ZATEX enamels* are a natural for wallboard . . . plywood . . . tool boxes . . . lunch boxes . . . filing cabinets . . . juvenile furniture and toys . . . vacuum cleaners . . . lamp bases . . . counter displays . . . and countless other products.

Get the full story on **Zatex,** *by writing or calling Atlas today.*

*Patented

ATLAS POWDER COMPANY
Wilmington 99, Delaware
for Industrial Finishes
Stamford, Conn.
North Chicago, Ill.

6* WAYS YOU'LL PROFIT WITH A Complete DeBurgh Finishing System

- LABOR SAVINGS UP TO 50% (OFTEN ENOUGH TO PAY FOR THE COMPLETE SYSTEM IN A MATTER OF MONTHS)
- PATENTED "CLOSE-PACK" FEATURE SAVES DRYER SPACE
- OFFERS TREMENDOUS SAVINGS TO SMALL PLANTS AS WELL AS LARGE THROUGH PATENTED "MULTIPLE-CYCLE" SYSTEM
- ALMOST ALL OPERATIONS CAN BE PERFORMED WITHOUT REMOVING UNITS FROM THE CONVEYOR PALLET
- ALLOWS NEARLY 100% PRODUCTIVE MAN-HOURS ALONG THE CONVEYOR LINE
- INSURES BETTER QUALITY CONTROL. TIME SAVED BY CONVEYORIZATION ALLOWS MORE TIME ON QUALITY

* There are many more advantages you should know about. Why not let a Koch finishing expert look over your set-up now? It could easily be your wisest decision of the year.

Phone, Wire or Write Today!

GEORGE **KOCH** SONS, INC.
EVANSVILLE, INDIANA

Casual Furniture

Interior of flow-coating applicator in vapor drain section.

Gets Tough Finish

There is nothing casual about the NUPON primer and NUBELITE enamels used by the Troy Sunshade Co. of Troy, Ohio, on their top-quality line of modern indoor-outdoor furniture.

These finishes have been custom-built to resist moisture, rain and long exposure to sunlight. They adhere tenaciously to wrought iron and cold-rolled steel in all temperatures without crazing, chipping or peeling. In addition, these Glidden finishes make possible the simplified finishing program now used by Troy which has increased production, reduced handling and rejects, and has shortened paint application time by nearly 60 percent.

This story of improved finishes and cost-saving procedures is typical of many growing out of the cooperation of Glidden Technical Service with leading manufacturers.

THE GLIDDEN COMPANY

INDUSTRIAL FINISHES DIVISION

11005 Madison Avenue • Cleveland 2, Ohio

SALES OFFICES AND FACTORIES:

San Francisco, Los Angeles, Chicago (Nubian Division—1855 North Leclaire Avenue), Minneapolis, St. Louis, New Orleans, Cleveland, Atlanta, Reading. Canada: Toronto and Montreal

National Sanders

CAN SPEED PRODUCTION IN YOUR FINISHING OPERATION

Whether you need an orbital action sander for fast stock removal, or a straight-line action machine for working with the grain, National has the sander you need. They have a proven record of reliable and efficient service, long life, ease of operation, and for producing the best sanded surface in the shortest possible time. Let us send you full information . . . write today.

MODEL 300

NATIONAL NS SANDERS

NATIONAL AIR SANDER, INC.

2820 AUBURN ST., ROCKFORD, ILLINOIS

On the building pictured above we have technical and laboratory facilities available to help improve and speed up your furniture finishing.

We manufacture both clear and water white lacquers and sealers of the highest type—low and high solids—with cold check resistance—tough—flexible—alcohol resistant—in fact just about everything in a lacquer finish you might expect, either hot or cold, formulated for spray application. Also pigmented lacquers any sheen to meet your requirements.

STAINS
FILLERS
SEALERS
LACQUERS
SYNTHETIC ENAMELS
PRIMERS
PAINTS & VARNISHES

For information on the above, why not have one of our sales-service representatives call on you and discuss your problems personally.

THE GILBERT SPRUANCE COMPANY

PHILADELPHIA 34, PA. • WINSTON-SALEM, N. C.

for easy, safe booth maintenance

"LIQUID ENVELOPE"

the original time-tested strip-coating

See for yourself how much time and money "LIQUID ENVELOPE" saves. See how it promotes fire-safety, increases illumination, helps ventilation.

"LIQUID ENVELOPE" is non-toxic . . . does not contain dangerous chlorinated solvent. It will not corrode metal walls or ventilating ducts. And it's absolutely flame proof and fireproof . . . the dry film will not burn or support combustion.

Order a 5-gallon test-sample at the drum-lot price. Convince yourself—as hundreds of smart operators have.

BETTER FINISHES AND COATINGS, INC.

268 Doremus Avenue, Newark 5, N. J. • 122 East 7th St., Los Angeles 14, Calif.

DISTRIBUTED BY

Abrasive & Supply Co., Detroit, Mich.
Aviation Lubricants Co., Inc., San Diego, Calif.
Bay State Spray Equipment Co., Springfield, Mass.
C & H Supply Co., Seattle, Wash.
The Dean & Barry Co., Columbus, Ohio
Eastern Spray Equipment
c/o Mitchell-Love, Philadelphia, Pa.
Edgcomb Steel of New England, Inc., Milford, Conn.
Elay's Newport News, Va.
Ellicott Paint Co., Inc., Buffalo, N. Y.
Finishing Equipment & Compressor Co.
Kansas City, Mo.
John Henry Foster Co., Minneapolis, Minn.
Franklin Supply Co., Providence, R. I.
General Spray Equipment Co., Boston, Mass.
H. J. Gottemoller Co., Inc. Baltimore, Md.
Globe Chemical Co., Louisville, Ky.; Cincinnati, O.
The Hubbard Co., San Francisco, Calif.
Kellermann Paint Co., New York, N. Y.
Koehler Rubber & Supply Co., Cleveland, Ohio
The Lee Manufacturing Co., Waterbury, Conn.
The Leonard Co., St. Louis, Mo.
Matson Industrial Supply Co., Grand Rapids, Mich.
Mid States Industrial Corp., Rockford, Ill.
Vic Miner Co., Toledo, Ohio
O'Donohue Sales Co., Milwaukee, Wis.
Paints & Lacquers, Inc., Chicago, Ill.
Pauli & Griffin Co., San Francisco, Calif.
Plastic Paper Co., Los Angeles, Calif.
Porter Paint Co., Louisville, Ky.
Protective Prod. Distributors, Hamburg, N. Y.
R. W. Rantoa and Co., Cleveland, Ohio
Hugh Russell & Sons, Ltd., Montreal, Can.
Scobell Chemical Co., Rochester, N. Y.
Sprayway Co., Los Angeles, Calif.
Supplee-Biddle-Stultz Co., Philadelphia, Pa.
(Industrial Division)
Tanner and Co., Indianapolis, Ind.
Tri-State Spray Equipment & Compressor Co.,
Omaha, Neb.; Rock Island, Ill.
In Europe:
Jensen & Nicholson, Ltd., London, Eng.

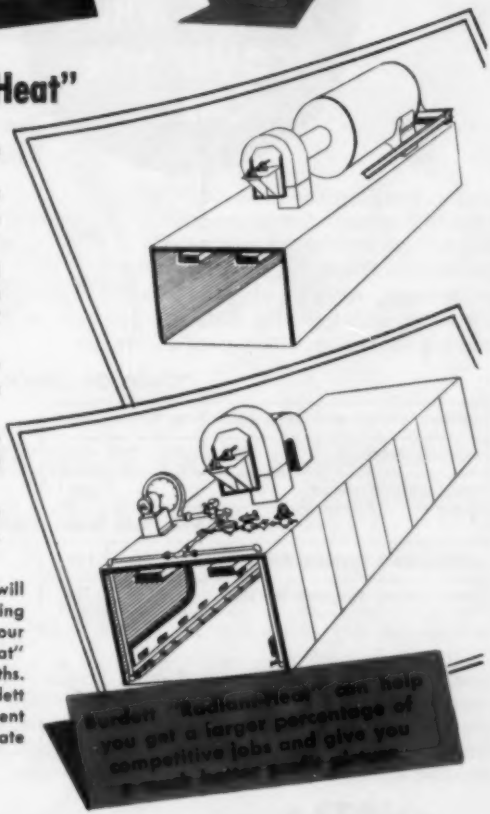
Here's How

BURDETT
(Gas-fired)
"Radiant-Heat"

will convert your oven to meet the times

Burdett "Radiant-Heat" will give you . . .

1. The most efficient method of heat transfer of any known system.
2. Processing time is reduced from 30% to 70% through deep heat penetration as only radiant heat can produce.
3. The greatest fuel economy due to complete combustion of *all* gases.
4. Highest efficiency of any commercial gas combustion system.
5. A uniform, high quality product assured at all times.



These five all-important features will improve your competitive standing greatly and you can expect your conversion to Burdett "Radiant-Heat" to pay for itself in a matter of months. There is no obligation for a Burdett engineered survey of your equipment and recommendations with estimate of cost.

Ask for full details

BURDETT
MANUFACTURING COMPANY

3425 West Madison Street, Chicago 24, Illinois

DETROIT PHILADELPHIA NEW YORK CLEVELAND DALLAS

Also Manufacturers of "Radiant Heat" Systems, Ovens, Heaters, Air Make-Up Units, Spray Booths and Washers

EGYPTIAN
Kitchen Cabinet
BAKING WHITE
COVERAGE CHECK

Reveals Amazing Economy Hidden in every Gallon Can

41,280 sq. ft. covered at .00929 of a cent per sq. ft.

Routine finishing-room, cost-checks by product manufacturers sometimes bring to light facts about a supplier's product that amaze the supplier himself.

For instance, recently an elated metal kitchen cabinet manufacturer, coating his product with Egyptian Baking White showed us finishing material cost figures compiled during an actual production run.

COVERAGE CHECK

cabinets coated with Egyptian Baking White	564
cabinets recoated	40
total cabinets coated	604

604 Cabinets Coated: each cabinet 68.344 sq. ft. Total Area Coated 41,280 sq. ft.

FINISHING MATERIAL CONSUMED

total gallons Egyptian Baking White	106
total gallons Egyptian Reducer	20

Finishing Material Cost per square foot of Coverage .00929 of a cent

Even in this day of good paint coverage, we think this establishes some kind of a record.

Doesn't it make sense that the Hidden Economy . . . BETTER COVERAGE . . . in every gallon of Egyptian Baking White could reduce your finishing material costs too . . . and at no sacrifice of any required characteristic of a quality finish. Write to-day for detailed information or invite an Egyptian Industrial Finishes Specialist to call on you. No obligation of course.

EGYPTIAN *Industrial Finishes*

The EGYPTIAN LACQUER MANUFACTURING COMPANY

BOX 444, NEWARK 1, NEW JERSEY

EXECUTIVE OFFICES, ROCKEFELLER CENTER, N. Y. • Plants: South Kearny, N. J.—Lafayette, Ind.

Can you afford to SAVE

10% — 15%

ON THE PURCHASE PRICE OF AN INDUSTRIAL OVEN OR DRYER

NO! — not if it means a loss of any output of finished product. Before you purchase—compare the value of lost production, year after year, with any possible saving in original equipment cost.

ROSS SYSTEMS

J. O. ROSS ENGINEERING CORPORATION

MANUFACTURERS OF AIR PROCESSING SYSTEMS

444 MADISON AVENUE NEW YORK 22, N. Y.

ATLANTA • BOSTON • DETROIT • CHICAGO • SEATTLE • LOS ANGELES

ROSS ENGINEERING OF CANADA, LIMITED, MONTREAL, CANADA • CARRIER-ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND

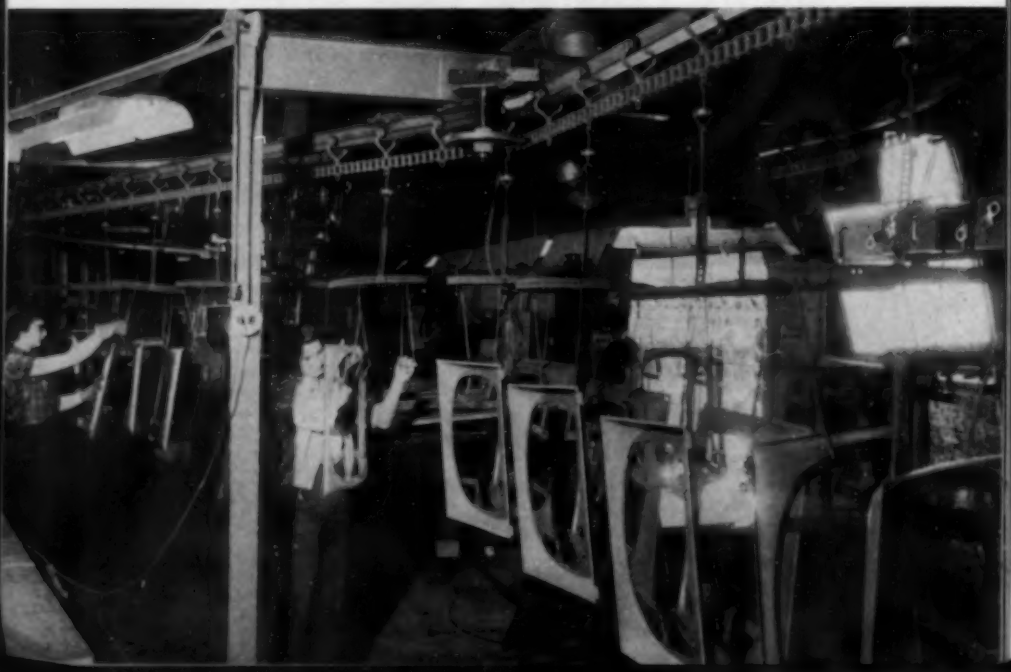
Finishing TV Masks

Includes vapor-spray-vapor degreasing, electrostatic spray, infrared drying—and, on some styles, touch-up spraying, form fit mask spraying and striping.

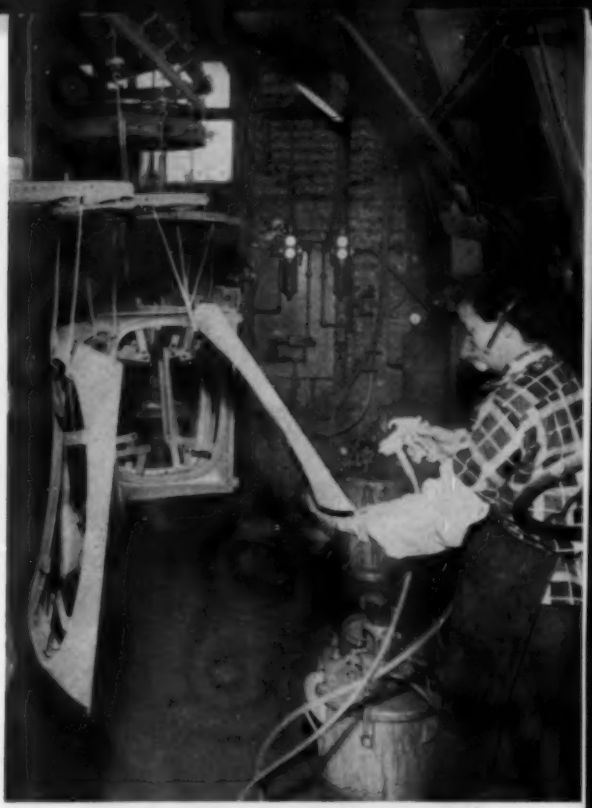
TELEVISION MASKS! There are as many different styles and colors as there are manufacturers of TV sets. Some masks, rather plain in design, are finished in either gold or copper bronze. Others have intricate profiles, and are finished in two colors with a stripe added, perhaps in gray, gold or yellow.

Because of these intricate profiles, it is practically necessary that we maintain two finishing rooms —one for electrostatic application of enamel and the other for hand spraying through precision metal masks, and striping. All television masks go through the main finishing room where either the gold or copper bronze coat, or a basic color coat is applied electrostatically. In this article I will discuss both types of masks.

All masks, regardless of size and profile, are hung on perforated metal hoops, either two or four masks to the hoop, depending upon size and style, see accompanying



By JOHN KABA, Jr.
Finishing Foreman
Modern Tool & Die Co.



Touching up, by hand, some masks of intricate contour design after automatic electrostatic spraying.

Opposite page: TV masks leaving infrared baking tunnel at right. The inspector appears in center.

illustrations. These hoops are suspended from an overhead monorail conveyor which travels at a speed of 11.2-ft. per minute. Hangers are on 24-in. centers. The masks go through a trichlorethylene vapor-spray-vapor degreaser to remove the light oils used in fabricating.

Bronze or Color Coat Put On Electrostatically

Masks travel for seven minutes between the degreaser and the electrostatic spray booth. As they approach the electrostatic spray booth they enter a 130,000-volt static field. While they are rotated mechanically in the field, two fixed spray guns spray gold or copper bronze or a basic color coat.

The gold and copper bronze enamels are used at a viscosity of 13 seconds at 78° F., as measured in a No. 4 Ford cup. Atomizing pressure is 18-lbs. and fluid pressure is 4-lbs. Some of these bronze powders are mixed in clear synthetic; others are mixed into pigmented enamel, depending on the color effect specified by the set manufacturer.

Some masks that are relatively simple in contour design can be completely coated satisfactorily by automatic electrostatic spraying, but on some of the more intricate profiles, a hand spray touch-up is necessary as a follow-up. This is done right after the masks leave the electrostatic spray booth. A

flash (air-drying) time of four minutes elapses before the masks enter the infrared electric oven where the finish is baked for 12 minutes at 325° F.

Some TV Masks Require Additional Operations

Those TV masks that require two colors and a gold stripe—they move through the degreaser and then through the electrostatic booth where a flat green synthetic enamel is sprayed on at a viscosity of 14 seconds at 78° F., as measured in a No. 4 Ford cup. Atomizing and fluid pressures are the same as are used for gold and copper bronze enamels.

These masks continue by overhead conveyor to the hand spray booths. Here they are removed from the conveyor and placed in air operated, metal masking jigs which cover the area of the mask that is to remain green. Then a gray synthetic enamel is hand sprayed over all unmasked areas. The TV masks are again hung on the overhead conveyor to pass through another infrared electric oven where the finish is baked for six minutes at 325° F.

Hand spraying the contrasting color on masks through compressed air operated precision metal masks.

This jig protects the face of the mask and at the same time provides a guide for the striping tool; a gold stripe is applied on the inner rolled edge of the finished mask.

Perfect Stripes are Rolled On With a Striping Tool

Masks to be striped travel for 15 minutes to cool before they are removed from the conveyor and placed in a jig, see illustration. This jig is constructed so as to protect the entire surface of the mask except the inner rolled edge. It also forms a positive guide for the wheel of the striping tool. The gold stripe is rolled on by hand, using a regulation striping tool with a

ADMIRAL'S
Years Ahead
Styling . . .
Golden
Picture
Frame

made possible by . . .

GOLD-DUOTONE

To enhance the beautiful mahogany or blonde oak cabinets, and add new dimension of picture realism, Admiral chose GOLD-DUOTONE by Nikolas to produce its all new Golden Picture Frame.

This ready-to-use, newly formulated material ends the mess of mixing bronze powders. It will remain stable for six months; no more worry of losing material through spoilage; it is a fast drying finish that will add to the beauty of any product; has mar-resistant hardness; is adaptable to any production schedule.

This beautiful finish is available in any texture of bronze powders, in all colors of brass, copper, gold or aluminum.

NIKOLAS
SINCE 1890

For Complete Information, Samples, or Demonstration . . . Write-Wire-Call

G. J. NIKOLAS & CO., Inc.

2850 Washington Blvd., Bellwood, Illinois

33 Grand St., Brooklyn 11, N. Y.

wheel of suitable face to produce the desired width stripe.

For fast, quality striping the consistency of the material must be just right. It must be free flowing but not too thin. Striping paint that is too thin will flow too freely, and may run over adjacent areas of the mask. Also, it will not have sufficient hiding power; the base color will show through enough to produce a false color stripe.

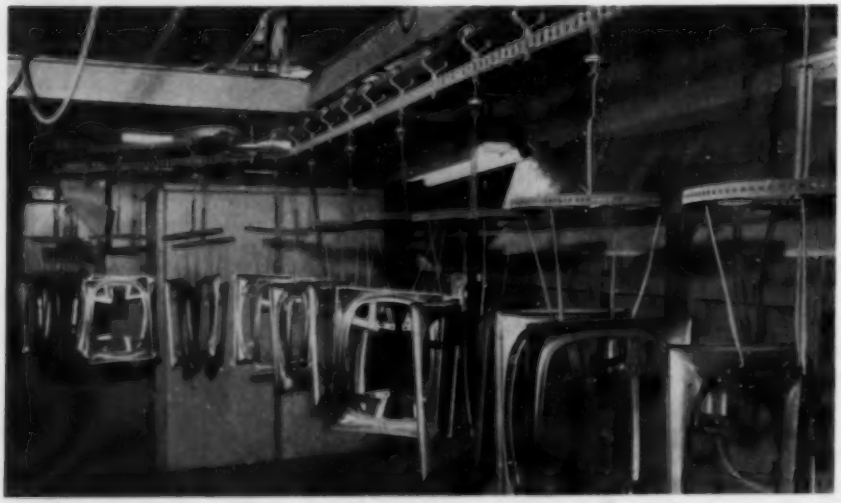
On the other hand if the material is too viscous (too thick) it will not flow out uniformly. This condition will cause breaks in the stripe and, as a result, a lot of restriping will have to be done. Material that is too thick will slow down the striping operation.

To prevent dust and flying particles from entering the room and contacting freshly coated masks, our finishing room is closed and pressurized [kept under slight air pressure inside]. A total of 12,000-c.f.m. of filtered air is moved into the room but the exhaust system pulls out only 10,000-c.f.m. This excess of 2000-c.f.m. of filtered air is sufficient to keep the air in the finishing room clean at all times.

In other words, if or when a door or window is opened, *the movement of air is always outward because the room is under slight pressure inside.* No dust particles of any kind will be sucked into the finishing room from an adjoining room or from the outside.

Glidden Expands in Canada

A new Glidden paint and varnish plant, the first of three planned additions in the Province of Quebec was recently dedicated at Ville LaSalle, a Montreal suburb, by Dwight P. Joyce, president of the Glidden Co. Costing about $600,000, the Ville LaSalle plant has an initial annual capacity of 700,000 gallons.



TV masks moving toward electrostatic spray booth in background. Infrared oven is at right.

STEEL

EBONOL "S" the low-temperature process giving a jet-black oxide coating to steel . . . simply and economically. *Operating temperatures: 285-290°F.*

EBONOL "S-30" meets military specifications for steel blackening. *Operates from 295-305°F.*

COPPER and BRASS

EBONOL "C" meets all government specifications for blackening copper and copper alloys, *210-220°F.*

ZINC

EBONOL "Z" for an abrasive-resistant dull or glossy finish on zinc and zinc base alloys . . . in 5 to 10 minutes at *160-180°F.*

EBONOL "Z-80" ideal for blackening electroplated zinc and zinc base alloys . . . *works at room temperature.*

WRITE US ABOUT Enthonics* as applied to ANY BLACKENING OR OTHER FINISHING PROBLEMS.

U.S. Patent Nos. 2,364,993; 2,460,896; 2,460,898; 2,481,854 ® Reg. Trademark

ENTHONE INCORPORATED

442 Elm Street, New Haven, Connecticut

REPRESENTATIVES AND STOCK POINTS

Chicago, Ill. — Rocky River, Ohio — Los Angeles, Calif.

**The Scientific Solution of Metal Finishing Problems*

Economical Operation of Convection Batch Ovens

IN CONNECTION with any paint-spraying-baking operations on metal parts, it is important to plan ahead when working out the time schedule. Don't just let it come hit or miss, but plan the timing of everything involved and you can probably work out something smooth and economical.

Let's take, for example, a typical installation: Two sprayers, each at a spray booth, spraying metal parts to be loaded onto trucks or portable racks. Also, two batch-type, gas-heated convection ovens, each having a capacity of two trucks. These sprayers start their working day at 8:00 A.M., have lunch from 12:00 noon to 12:45 P.M., and end their working day at 4:45 P.M.

(Continued on page 34)

Baking Schedule: 25 minutes at 250° F.

MORNING PERIOD (Sprayer No. 1)

Start spraying ---------- 8:20 a.m.

Light oven No. 1 ---------- 9:05 a.m.

First load in oven --------- 9:20 a.m.

Last load in oven ----------11:20 a.m.

Total oven loads for
the morning period, 3. --- 9:20; 10:20 & 11:20 a.m.

Shut off oven No. 1 --------11:40 a.m.

Sprayer goes on spraying to 11:55 a.m. (½ load approx.)

AFTERNOON PERIOD

Start spraying ---------- 12:45 p.m.

Light oven No. 1 ---------- 1:00 p.m.

First load in oven -------- 1:15 p.m.

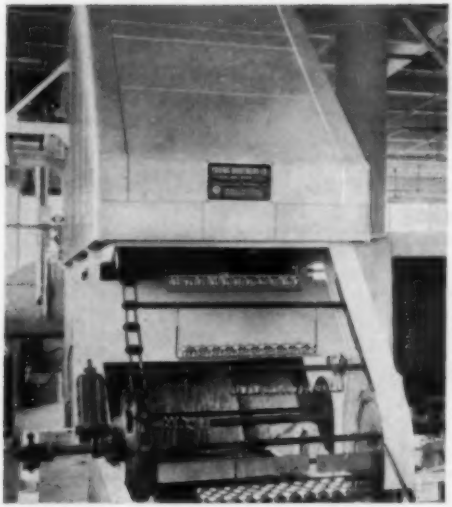
Last load in oven --------- 4:15 p.m.

Total oven loads for
the afternoon period, 4.- 1:15; 2:15; 3:15; 4:15 p.m.

Shut off oven No. 1 ------- 4:40 p.m.

Sprayer goes on spraying till 4:35 p.m. which allows ten minutes for clean-up time, or until 4:45.

YOUNG BROTHERS OVENS



1st

in dependable *Low Cost* BAKING AND DRYING . . .

Continuous 2-Chain Conveyor Baking Oven

Young Brothers Ovens are engineered and built by oven specialists to meet individual baking and drying problems. That's why it will pay you to consult with Young Brothers Co. first for your particular oven requirements.

You can be sure of improved production and savings in time and material regardless of your process, when you install Young Brothers Ovens.

Experience gained in over 50 years of developing Batch and Conveyor Ovens for thousands of installations is your assurance of outstanding performance and competent service. For consistently better results, get the information on Young Brothers Ovens first.

Write for Bulletin 4.

YB Co

Established 1896

YOUNG BROTHERS COMPANY

1835 Columbus Road Cleveland 13, Ohio

Sprayer No. 1 sprays straight baking enamel; his production is two truckloads per hour. The schedule of when to spray, when to light the oven, when to load the oven and when to shut off heat in oven is shown in one of the two accompanying typewritten tables. [*To page 36*]

Baking Schedule: 35 minutes at 260° F.

MORNING PERIOD (Sprayer No. 2)

Start spraying ---------- 8:20 a.m.

Light oven No. 2 ----------10:00 a.m.

First load in oven
(2 truck loads) ---------10:20 a.m.

Last load in oven
(1 truck load) ----------11:20 a.m.

Total truck loads for morning
period: 3. ----------10:20; 11:20 a.m.

Shut off oven No. 2 --------11:55 a.m.

Sprayer goes on spraying ---11:20 to 11:55 a.m.
(Production ½ load to be left for afternoon baking.)

AFTERNOON PERIOD

Start spraying ----------12:45 p.m.

Light oven No. 2 ---------- 1:30 p.m.

First load in oven
(1½ truck loads) -------- 1:45 p.m.

Second truck load sprayed -- 2:45 p.m.

Third truck load sprayed --- 3:45 p.m.

Sprayer goes on spraying --- 3:45 to 4:10 p.m.
(Prod. near ½ truck load, will bake till 4:45 p.m.)

Last load in oven ---------- 4:10 p.m.

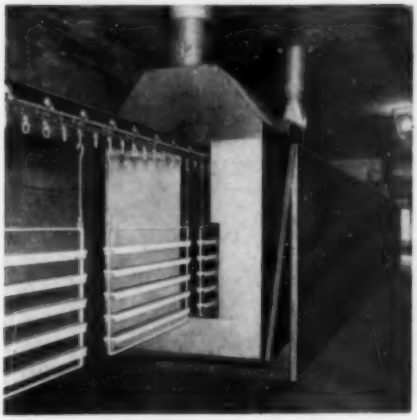
Shut off oven No. 2 -------- 4:45 p.m.

Total truck loads for the afternoon period, 4.

Here's a Real

VIRDEN VALUE

in this MODERN "Streamliner" LIGHTING FIXTURE



ENAMEL DRIED IN A CONTINUOUS LANLY FINISHING OVEN

Eye appeal and product "Sale-ability" of this attractive Virden fixture are greatly enhanced by the smooth, lustrous coating of white synthetic enamel on certain component parts.

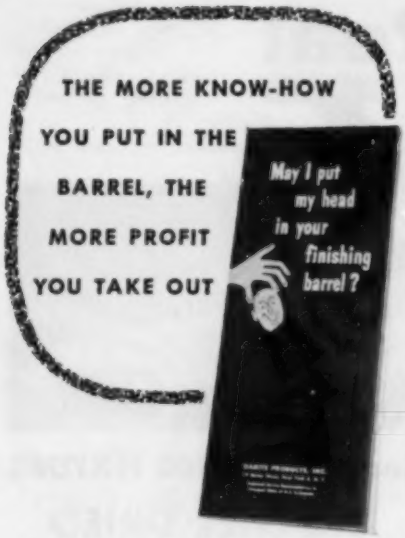
Drying is rapidly and economically accomplished in a LANLY gas-fired, continuous oven at 300 degrees F.

Precise, volume production is a routine matter at Virden.

YOU, TOO, CAN DO A BETTER JOB WITH LANLY OVENS

Write today for details and let us show you how!

LANLY FINISHING OVENS
THE LANLY COMPANY • 760 PROSPECT AVE. CLEVELAND, OHIO



Useful facts gathered during Oakite's years of experience in barrel finishing are packed in this 10-page booklet covering such subjects as:

PRECLEANING

CUTTING DOWN, DEBURRING

PICKLING, DESCALING, BRIGHT DIPPING

BURNISHING

FREE For your copy of the Oakite Barrel Finishing booklet, write to Oakite Products, Inc., 32F Rector Street, New York 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS · METHODS · SERVICE

Technical Service Representatives in Principal Cities of U. S. and Canada

What the sprayer paints from 4:15 to 4:35 P.M. is left to air dry overnight and will be baked on the following day, on the morning shift. In the winter time this can only be done if a minimum temperature of 72° F. is maintained in the spray room overnight.

Now Sprayer No. 2 sprays wrinkle enamel, doing one truck load per hour. The baking schedule is 35 minutes at a temperature of 260° F. His schedule of production activities is shown in the other typewritten table, the second line of which identifies him as "Sprayer No. 2."

In case the convection ovens are electrically heated, it is advisable to look into the demand charges that are applied in connection with starting up of the oven. According to local conditions, these charges might be higher or lower in cost than the savings in the electric current involved. In these types of ovens the time lapse between starting and getting to the desired temperature usually is longer than that of the gas-heated ovens.—*J. J. Pardes.*

Wrinkle Over Wrinkle

TRY THIS, if you have the problem of reworking surfaces finished in wrinkle enamel—like, for example, rejects due to imperfections or a change in the color scheme. Stripping can be avoided in almost 95% of the rejects that are due to an excessively heavy pattern, or chips caused by handling.

Just spray wrinkle over wrinkle. This second coat flows out on the cured wrinkle paint film in such a manner that it fills in those wide smooth spaces between tiny hills of the wrinkle formation, and it flattens the higher peaks of the formation. You will get a perfectly uniform pattern of wrinkle finish. Viscosity, wet

film thickness, fluid and atomizing pressures—all should be the same as those employed in the original coat. Spraying distance, about seven inches.

Parts rejected for paint runs can be scraped along the run with a sharp implement, dry-sanded lightly, and then resprayed with wrinkle. Chipped surfaces should be filled in with an air-drying filler, sanded when completely hardened, and then resprayed with wrinkle.

When a change in the color scheme is required, many manufacturers use the lacquer overspray method. The drawback of this process is the fact that only a light coat of lacquer can be sprayed, and the resulting thin film of lacquer does not resist abrasion. Spraying wrinkle over wrinkle gives the protection of a completely cured, double coat of hard wrinkle finish.

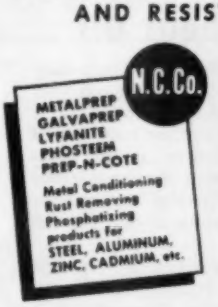
Operations eliminated by this method include the following:

1) Stripping and subsequent cleaning of parts; 2) Refilling crevices and imperfections in filler in castings; 3) Respraying of primer coat or coats; 4) Overall handling.—*John J. Pardes.*

Lea-Michigan, Inc. at Detroit; Another Finishing Specialist

Lea-Michigan Inc., 14066 Stansbury Ave., Detroit, Mich., one of four companies comprising the Lea Group of Finishing Specialists—The Lea Mfg. Co., Waterbury, Conn., Lea-Ronal, Inc., Long Island City, N. Y. and Lea Mfg. Co. of Canada, Toronto—is now occupying a new factory where it is manufacturing a number of Lea products used in connection with polishing and buffing, including Lea Gripmaster polishing wheel cement; Lea Liquabrade spray polishing compound for ferrous and non-ferrous metals, etc.

Yes, We've Got it!
EVERYTHING—
from A to Z
in
PHOSPHATE COATINGS—
ASSURING YOU SUPERIOR PAINT BONDING AND RESISTANCE TO CORROSION!



LYFANITE "A"
FOR ALUMINUM ALLOYS
Bulletin A 54-98

LYFANITE "Z"
FOR IRON AND STEEL
Bulletin Z 54-119

● You are assured the finest results in the preparation of Aluminum, Iron and Steel surfaces before painting by using Lyfanite, the superior phosphate coating that gives enduring paint protection, increased resistance to corrosion and a substantial saving in both material costs and maintenance costs.

Made by the Manufacturers of Metalprep and other Prep Products

NEILSON CHEMICAL CO.

3682 Tecumseh Road
Windsor, Ontario

6562 Benson St., Detroit 7, Mich.

3411 Union Pacific Ave.
Los Angeles 23, Calif.

Wash Primers

WHAT ARE "Wash Primers" for metal? This is a question frequently asked but not always clearly answered. Some information on this subject is revealed in Technical Release No. 11, published by Bakelite Co., a Division of Union Carbide & Carbon Corp., in New York. Quoting from page 14 under Metal Conditioners:

"The most important application of vinyl butyral resins in the coatings field is in the production of metal conditioners, or pretreatments, more widely known as wash primers. These wash primers are solutions of vinyl resin XYHL* containing rust inhibitors. They are applied as thin coatings of between .0001 and .0005 inches and merely require air-drying to establish a firm bond to metal surfaces. This inhibitive film serves to prevent corrosion and undercutting of the film by rust, as well as providing a firm anchor for subsequent paint coats.

"Wash primers do not replace conventional primers and shop-coats, but must be classed with industrial phosphate metal treatments. They provide a temporary protection against atmospheric rusting, and must be protected by topcoats before exposure to the weather. These topcoats can be applied within 15 minutes of the application of the wash primer, since the vinyl butyral resin solution dries entirely by solvent evaporation. If desired, this drying can be speeded by heat. . . .

*A Bakelite product.

"Hydrin" protects highly finished parts like these, after water rinses, between operations.*

Amazing New Chemical Treatment Prevents Rust Without Oil

Newly-developed "Hydrin," dissolved in water, chemically prevents rust during in-plant operations . . . during and after rinsing . . . prior to painting or packaging. No oiling is necessary. Surfaces may be painted or further rustproofed following the "Hydrin" treatment. "Hydrin" is also especially desirable for inhibiting water used for hydrostatic testing of pumps, tanks, radiators, etc. "Hydrin" will provide interim protection for metal surfaces at a cost of only pennies per gallon.

Write for complete information about "Hydrin." Address Rust Prevention Engineering Service, Nox-Rust, Department IF-114, 333 North Michigan Avenue, Chicago 1, Ill.

**Pat. applied for*

America's Leading Manufacturer of Scientific Rust-Preventive Products

NOX-RUST CHEMICAL CORPORATION
333 North Michigan Avenue, Chicago 1, Illinois
Offices in Principal Cities

"Phenolic, oleoresinous, and alkyd paints adhere to the wash-primed metal. Most nitrocellulose lacquers adhere to wash primers as a result of modifiers such as alkyds contained in the lacquer. Nitrocellulose, itself, has relatively little adhesion to a wash primer film. In general, coatings based on vinyl chloride copolymers (except vinyl resin VAGH*), vinylidene chloride, and acrylic and methacrylic resins do not adhere to wash primers. Just as alkyd resins improve the adhesion of nitrocellulose lacquers to wash primers, suitable blends of vinyl resin VAGH with other vinyl resins will often develop the required adhesion."

Merriman Represents Whitfield in Ohio, Pa. and N. Y.

Appointment of Fredric E. Merriman as a Sales Engineer for the Whitfield Chemical Co., 14225 Schaefer, Detroit, Mich., is announced by C. Whitfield Smith, company president. His territory will include parts of Ohio, Pennsylvania and New York.

This appointment is part of an expansion program undertaken to meet the increased demand for Whitfield's specialized metal cleaning, phosphating, and paint stripping chemicals and processes.

United Lacquer Opens Sales Office in St. Louis, Mo.

United Lacquer Mfg. Corp., Linden, N. J., announces the opening of a sales office at 3408 Washington Road, St. Louis 3, Mo., under the direction of Mr. C. W. Borcherding.

Through the St. Louis office, United Lacquer will be able to offer more complete service to users of United's extensive line of industrial coatings in the mid-western states. These products include air dry and bake enamels, hot and cold furniture lacquers, wrinkle finishes, thousands of specialty coatings and finishes made to the user's specifications.

The St. Louis sales office will also offer mid-western companies, United Lacquer's patented Multakolor finish which gives two or more colors in one spray coat. Multakolor covers surface defects in one coat, and is impervious to alcohol, grease, crayon marks, ink, and other surface abrasions.

FOR A MIRROR-LIKE FINISH YOU CAN'T BEAT DETROIT "TAC" RAGS

DETROIT "TAC" RAGS are an absolute necessity for cleaning any metal, wood or plastic surface before painting. Removes all dust, lint and sanding particles. Order today through your supplier.

STANDARD OF THE FINISHING INDUSTRY SINCE 1934

DETRO MFG. & SALES CO., INC., CULVER CITY, CALIFORNIA

Let us tell you about our . . .

GRAINING PLATES

• Widely used by leading manufacturers for reproduction of wood grains on wood, metal, hard-board and plastic surfaces.

AMERICAN RICHWOOD PRODUCTS CO.

Graining Plate Division

104 E. Mason St. Milwaukee 2, Wis.

Finishing Wood Tables

BY L. F. MERDER
Superintendent Plant No. 2
Jasper Novelty Furniture Co.

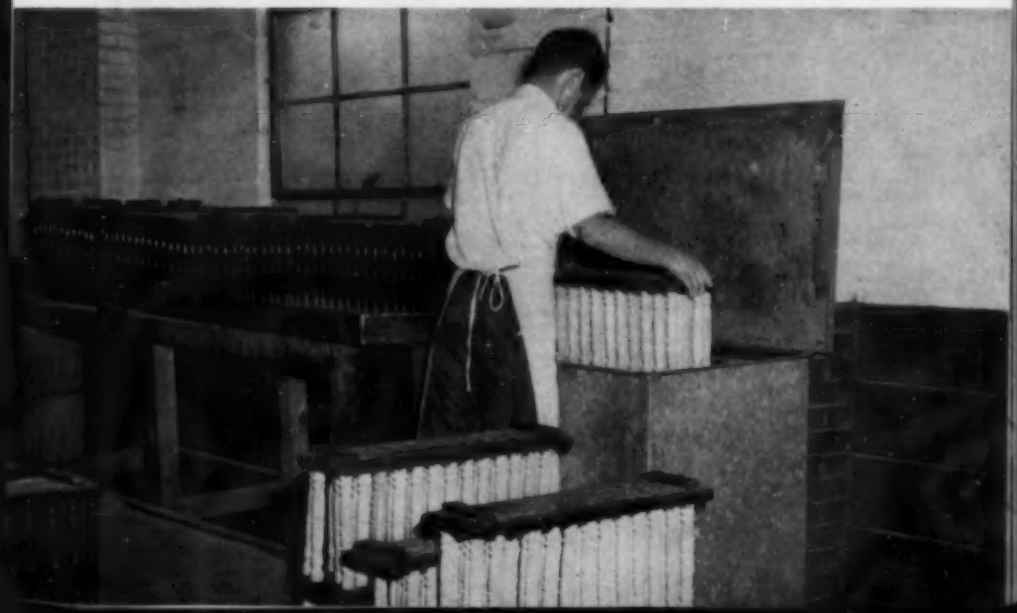
WE MANUFACTURE a wide variety of tables in high grade mahogany and limed oak; also, we use grain transferred mahogany, walnut and oak tops with poplar and maple frames. With the exception of those made of genuine mahogany, our tables are finished K D. All tables, including those made of mahogany, are cartoned and shipped K D.

Ordinarily, when one thinks of mass production finishing, an extensive conveyor system comes to mind. However, this is not necessarily true in every plant. Because of the difference in finishing procedure on the various tables produced, we use tiered trucks mounted on ballbearing swivel casters.

After having been sprayed or dipped, as the case may be, tops, frames, shelves and legs for tables may be stored on trucks to dry, or for transfer to the next operation. Through the use of these tiered trucks we obtain mass production finishing of K D tables. A few examples will illustrate how it is accomplished.

On this all genuine oak table, all parts are coated by spraying. Twelve tapered square legs (for three tables) are screwed vertically

Hand dipping 52 legs at a time in stain. The legs drain on metal pan at left of operator.



Spraying top coat lacquer on limed oak table tops. Table tops are moved through the finishing room on tiered trucks as shown at right of workman.

into a board by means of the threaded bolt which is used later for assembling the tables. The legs are mounted in two staggered rows of six each, and they remain on this board through all finishing, sanding, drying and rubbing operations. There is enough space between them for hand sanding and rubbing. Staggering the legs on the board aids in all finishing operations. The table tops are moved through the finishing room on tiered trucks, each truck holding 84 tops.

The first finishing operation is to spray a "toner" on all parts. In this operation we use an atomizing pressure of 40-lbs. All of our finishing materials are sprayed directly from the drum, with the exception of filler, which is sprayed from a pressure container fitted with an air-driven agitator. Pressure on the fluid pump in this instance is 20-lbs. which is equal to about 8-lbs. fluid pressure expressed in terms of a pressure tank.

The "toner" coat air dries for from 45 minutes to one hour. Then the parts are lightly sanded with No. 6/0 sandpaper. Next a white filler is sprayed, at an atomizing pressure of 30-lbs., and with a tank pressure of 12 to 15-lbs. The filler

is padded in by hand, after which the filled surfaces are cleaned with wiping rags. An air-drying period of four hours follows. Then the parts are sprayed with a water-white 21% solids lacquer sealer. Atomizing pressure is 50-lbs. and pump pressure is 25-lbs. The sealer coat air dries one hour before being sanded with No. 5/0 sandpaper.

After the dust from sanding is blown off, the legs and tops receive a spray coat of 27%-solids water-white gloss lacquer. The spray operator uses an atomizing pressure of 60-lbs. and a pump pressure of 30-lbs. The top lacquer coat air dries overnight; then the finish is rubbed with No. 4/0 steelwool and cleaned up. Wrapping and packing follow.

How Grained Tops and Their Legs Are Finished

For less expensive tables in which grain transfer tops are used with poplar and maple frames and legs, the printed hardboard, cut to size, is sent to the finishing room where a protective strippable material is sprayed on the printed side only. These pieces of composition board are returned to the cabinet shop to be assembled in the top frames.

The completed tops (frames around printed hardboard) receive a spray coat of NGR stain, the spray man using an atomizing pressure of 30-lbs. and a pump pressure of 10-lbs. Printed mahogany and walnut tops have poplar frames and maple legs, but the printed limed oak tops take oak legs. The latter are sprayed with a toner and follow through the same finishing procedure as the genuine all-oak tables.

On the printed-top tables the NGR stain is allowed to air dry for 30 minutes. Then both tops and legs are hand dipped in an oil wiping stain for walnut, mahogany, blond or maple. After draining for about five minutes, the dipped parts are wiped and allowed to dry four hours. A 24% solids lacquer sealer is sprayed on, using an atomizing pressure of 50-lbs. and a pump pressure of 25-lbs. The sealer coat air dries one hour before the parts are sanded with No. 5/0 sandpaper.

The strippable protective coating on the printed top is now removed. This is done by cutting around the edge of the top and peeling off the coating, generally in one piece. The tops and legs are given a spray coat of 33% solids lacquer, using an atomizing pressure of 60-lbs., and pump pressure of 30-lbs. This lacquer coat air dries overnight before the legs and tops are wrapped and packed for shipment.

Turned Table Legs Are Dip Coated

For our less expensive tables, those legs on which we can obtain easy drainage are dip coated. As many as 52 legs are temporarily fastened (by one screw each) to a board so they can be hand dipped into walnut or maple stain. This stain coat air dries four hours. Then, while still attached to the board, the table legs are dipped into a varnish type sealer. After air drying two hours, they are again dipped into the same material. The legs are allowed to air dry overnight before they are wrapped and packed, with their respective tops, for shipment. [*Continued on page 44*]

AMAZING NEW SOLVENT

☆ **no fire hazard**
☆ **extremely low toxicity**
☆ **safe for all metals**
☆ **extra-high solvency**

CHLOROTHENE

A product of Dow Chemical and certainly the finest cold cleaning solvent yet produced. Fully the equal of carbon tetrachloride in cleaning power and drying time yet no more toxic than the petroleum naphthas. Completely nonflammable and safe for all metals, including aluminum, brass, magnesium.

FOR SAFER—FASTER—BETTER CLEANING write or phone the nearest stock point.

THE SOLVENTS and CHEMICALS GROUP

2540 WEST FLOURNOY STREET, CHICAGO 12, ILLINOIS

AMSCO SOLVENTS & CHEMICALS CO.—CINCINNATI 29—4619 Reading Road—MElrose 1910.

BUFFALO SOLVENTS & CHEMICALS CORP.—BUFFALO—Box 73, Station B—Bedford 1572.

CENTRAL SOLVENTS & CHEMICALS CO.—CHICAGO—2540 W. Flournoy St.—SEeley 3-0505.

DIXIE SOLVENTS & CHEMICALS CO.—LOUISVILLE—Dixie Highway at Appleton Lane—ATwood 5828.

HOOSIER SOLVENTS & CHEMICALS CORP.—FORT WAYNE 8—Nelson Rd. East—ANthony 0213—INDIANAPOLIS 22,—1650 Luett Ave.—MElrose 8-1361.

MISSOURI SOLVENTS & CHEMICALS CO.—ST. LOUIS 7—419 De Soto Ave.—GArfield 1-3495.

OHIO SOLVENTS & CHEMICALS CO.—CLEVELAND 11—3470 W. 140th St.—CLearwater 1-3770.

SOUTHERN SOLVENTS & CHEMICALS CORP.—NEW ORLEANS—1354 Jefferson Highway, P. O. Box 4067, Carrollton Station—Temple 4666.

TEXAS SOLVENTS & CHEMICALS CO.—HOUSTON—8501 Market Street—Orchard 6683.

WESTERN SOLVENTS & CHEMICALS CO.—DETROIT—6472 Selkirk Ave.—WAlnut 1-6350.

WESTERN SOLVENTS & CHEMICALS CO.—TOLEDO—Central Ave. at Reynolds Road—Jordon 0761.

WESTERN SOLVENTS & CHEMICALS (Canada) Ltd.—WINDSOR—1454 Crawford St.—Clearwater 2-0933.

WISCONSIN SOLVENTS & CHEMICALS CORP.—MILWAUKEE—1719 South 83rd Street—GReenfield 6-2630.

WOLVERINE SOLVENTS & CHEMICALS COMPANY—GRAND RAPIDS—1500 Century Ave., S.W.—Grand Rapids 5-9111.

Genuine Mahogany Tables

For genuine mahogany tables we have a finishing system that is commonly used on all better-grade furniture. As I have gone into detail on atomizing and pump pressures used in the finishing room, I shall merely list the sequence of operations on these tables.

Spray NGR stain.
Air dry 30 minutes.
Spray 4%-solids lacquer wash coat.
Air dry 30 minutes.
Sand with No. 6/0 sandpaper.
Spray filler.
Hand pad-in and clean up.
Air dry four hours.
Spray 21% solids lacquer sealer.
Air dry one hour.
Sand sealer with No. 5/0 sandpaper.
Spray shading lacquer.
Spray 26% solids top-coat lacquer.
Air dry three hours.
Spray second top-coat lacquer (same as first coat).
Air dry overnight.
Rub, clean and polish.

Although we use a high grade lacquer on our genuine mahogany and limed oak tables, we also use a very good lacquer, which is resistant to alcohol and heat, on all of our other tables.

Furniture Survey. Interesting statistics were recently released by John M. Snow, executive secretary of the National Association of Furniture Manufacturers. In an August survey, 98% of the reporting manufacturers thought business would be fair to good for the remainder of 1954. This is an increase of 3% compared with a similar survey in April.

This year has shown improvement. The summer furniture market averaged 61% better than in 1953, while the winter market was 26% better than 1953.

New Jones-Dabney Building in Louisville, Kentucky

The Resins & Chemicals Division of the Jones-Dabney Co., a division of Devoe & Raynolds Co., announces the start of construction of a new building at 11th & Hill Streets in Louisville, Ky., to house equipment for the manufacture of an entirely new product for use in the formulation and production of paint products.

The building, consisting of three floors, will be of reinforced concrete and brick construction with a floor space of 10,500-sq.ft. It will house chemical reactor equipment with an annual capacity of 6,000,000-lbs., but will have sufficient space for additional units that will make possible the production of at least 30,000,-000-lbs. per year. Additions can be made to increase its floor space to 25,500-sq.ft., with a corresponding increase in capacity.

Furniture Shop Blues

'Twas a busy Friday morning,
The entire crew was there,
Truck drivers with their helpers
Came trooping up the stair.

Ben was writing out the orders
For stuff that was to go,
George came up to see the reason
Why the trimmers were so slow.

"Is that set completed?"
Asked he with a worried look,
"It should've been ready long ago
According to the book."

"Shake a leg boys;
Let us make things fly,
Mustn't keep those trucks a waiting
Or we'll know the reason why."

"Hey John," came a voice
From somewhere in the shop,
"There are some deep scratches
On this finished table top.

Get Alec to spray it,
And hope it'll be okay
So we can load it on the truck
And get it out today."

This organized confusion,
Combined with mental grief,
Finally quieted down
And we all sighed with relief.

After a hard day's labor,
Comes a time of rest,
It sure feels good to know
That we've all done our best.

—John Novak

...BEAUTIFUL SHEENS WITH

Perfection Synthetic Satin Finishes

HERE ARE A FEW OF THE PLUSES YOU RECEIVE FROM PERFECTION'S EXCLUSIVE PROCESS OF SYNTHETIC FLATTENING:

- A Clear, Rubbed Effect Finish
- A Waxed Feel
- A Water Proof Finish
- A Liquor Proof Finish
- A Tough Elastic Finish

Available in: PERFEX SATIN FINISH (varnish); CLEAR SHEEN SATIN (lacquer)

IF YOU MANUFACTURE FURNITURE, WRITE US FOR SAMPLES

Perfection PAINT & COLOR COMPANY

INDIANAPOLIS 2, INDIANA

176' DeBurgh Finishing System*

5,651' DeBurgh Finishing System*

*Names on request.

WOOD FINISHERS, Large or Small:

It costs you nothing to make us prove that we can save you 40% or more of your finishing labor . . . 35% or more of your floor space . . . better your finish . . . pay for your installation in less than 24 months through $$ savings alone!

Push-pull handling and push-pull finishing must go! Make us prove our point. All of today's finishing techniques are being employed on DeBurgh systems, thanks to our flexibility.

A free engineered layout will be submitted on request.

"Designed BY a Furniture Manufacturer FOR Furniture Manufacturers"

Investigate!

DeBURGH CONVEYORS, Inc.

10 SOUTH 11TH AVE.
EVANSVILLE, INDIANA

1741 K STREET, N. W.
WASHINGTON 6, D. C.

*Pat Nos. 2317675, 2640580, 2640607

ROCKFORD VARNISH

RV

ROCKFORD, ILLINOIS

MANUFACTURERS OF PROTECTIVE AND DECORATIVE FINISHES

Wistful? Ah, yes . . . that wishful thinking will get you, sometimes. But, if you are a customer of Rockford Varnish Company, your wish is our command. We are Ready . . . Able . . . and Willing . . . to turn RAW materials into a beautiful finish that will put the gleam in your customers' eyes, and satisfy their wishes for SOMETHING BETTER. If our big range of standard finishes don't fulfill *your* wishes, we have several distinctive "specialties" that might. Try us.

Affiliate: GORDON BARTELS CO., *Roller Coating Specialists*

Colored Flock Shows Air Flow Pattern

ANOTHER interesting industrial use for flock is in the air handling field. Since the specific gravity of rayon and cotton flock is low, the flock moves easily by the slightest air currents. Also, since flock can be had in any color it is easy to identify against various colored backgrounds and lends itself to filter testing and other air handling tests quite readily.

To point out one use of flock for this purpose, some years ago, at a textile machinery show, a manufacturer of filtering and air exhausting equipment wanted to show how efficient his devices were in trapping dust particles, and in moving air in large areas.

After his machine was set up in the exhibition hall, he purchased various quantities of different lengths of colored rayon flock and different colors of very fine cotton flock.

During the demonstration and talk on the equipment, small amounts of flock that contrasted in color to the filters was blown into the air in front of the filter at various distances. Air currents picked it up and deposited it against the filter surface. The use of colored rayon demonstrated the pick-up characteristics of the fan unit.

Next, quantities of fine cotton flock were allowed to be picked up and drawn into the unit. After the flock had been deposited on the filters, the filters were separated to show how little had gone through each succes-

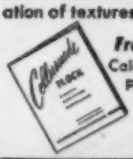
FLOCK

TYPICAL APPLICATION — Protects the finish of fishing plugs and tools, deadens rattling noises. Adds richness and color.

Dampens Vibration... Silences Noises...

ADDS BEAUTY, COLOR, SALES APPEAL

Every year more and more product designers find profitable uses for Cellusuede Flock. The fascinating textures of this versatile finish add new vitality, color, and sales appeal to many products. Or, Cellusuede takes on more enduring — even rugged textures for such varied functions as providing a protective cushion, dampening vibration, and silencing noises. Less expensive than fabric, Cellusuede is made principally from cotton, rayon, or hair fibers, and is available in an almost limitless combination of textures and colors to meet your needs.



Free Bulletin, Technical Assistance

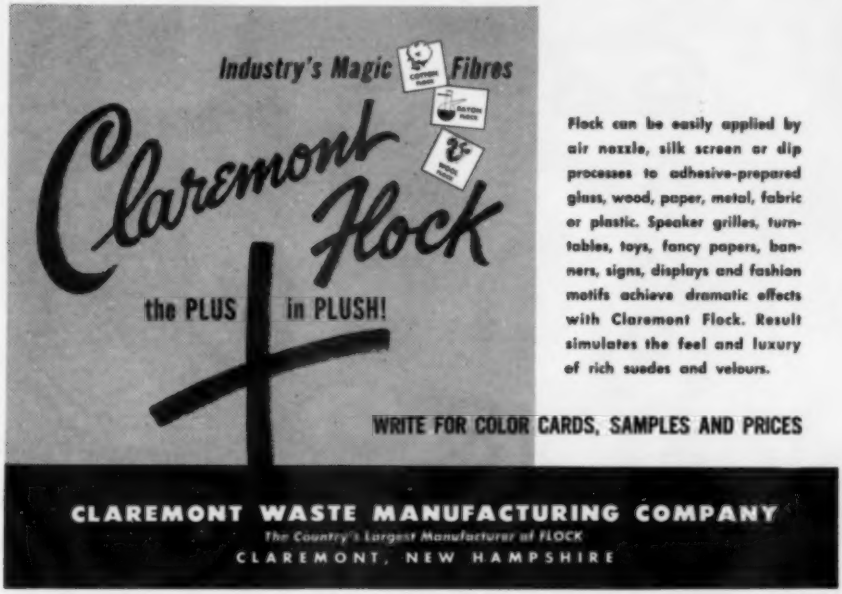
Call on Cellusuede for help with any potential application. Unexcelled facilities are available for flocking test samples. Ask for free bulletin describing profitable uses.

A DURABLE PROTECTIVE COATING WITH A THOUSAND USES . . .

- Can be applied to any surface which will support an adhesive film.
- Easy to apply on an individual or production-line basis — by spray, vibration, or electrostatic process.
- Wide range of textures and colors to suit your needs.

CELLUSUEDE PRODUCTS, INC.

514 N. MADISON STREET, ROCKFORD, ILLINOIS


Industry's Magic Fibres
Claremont Flock
the PLUS in PLUSH!
Flock can be easily applied by air nozzle, silk screen or dip processes to adhesive-prepared glass, wood, paper, metal, fabric or plastic. Speaker grilles, turntables, toys, fancy papers, banners, signs, displays and fashion motifs achieve dramatic effects with Claremont Flock. Result simulates the feel and luxury of rich suedes and velours.
WRITE FOR COLOR CARDS, SAMPLES AND PRICES
CLAREMONT WASTE MANUFACTURING COMPANY
The Country's Largest Manufacturer of FLOCK
CLAREMONT, NEW HAMPSHIRE

sive layer, thereby illustrating the efficiency of the filter units. White filter material was used and the color of the flock stood out to visually illustrate this unit and to prove the manufacturer's claims. It was a case of "seeing is believing", even though it's hard to see air currents.

This demonstration suggests the possibility of using flock to test air flow patterns in various types of air handling equipment, such as ventilating units for home use; and air flow patterns for heating and ventilating small closed areas, such as cars; and many other places where the air flow patterns are of special importance.

Besides showing the flow patterns in air-moving equipment, colored flock can be easily seen against dark backgrounds and can be used to indicate velocities visually as a check against calculated velocities.

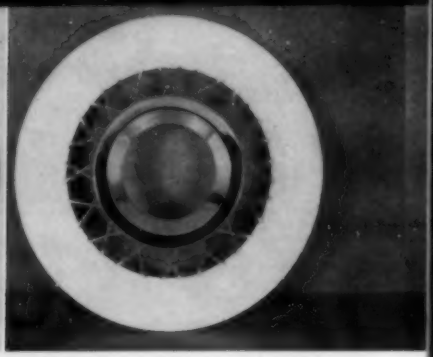
The use of flock for this purpose offers a visual indication of the effect of cooling fans in rooms where velocity should cause curtains and other items to blow around if it were too high. This test can be made by placing flock in various locations in a test room and watching the effect of air on it.

These are just a few ways in which flock can be used for air flow testing.

Since air is a "fluid", there seems to be no doubt that flock could be used in testing fluid flow patterns in clear pipe in the laboratory as well. Testing flow and resistance in bends, curves and elbows would seem to be a natural for colored flock.

Also, testing for fluid flow in various designs and configurations such as Venturi sections, etc., would give a visual indication of the action of liquids of various viscosities in different pipe designs.—*R. J. Steinfield.*

Painting Wheel Rings For Automobiles



THE P W WIRE wheels and wheel rings for automobiles require an exceptionally durable and attractive finish. They are extra accessories for "dolling up" the appearance of an automobile. These wire wheels are held on the automobile wheel with spring clips, and are installed without deflating the tire. They can be easily snapped away from the wheel for washing. When pushed back in place they hide all balance weights, air valves and rims. They are produced in an all chrome finish; also with chrome spokes and white enamel wheel ring. This white enamel ring produces the effect of white side wall tires.

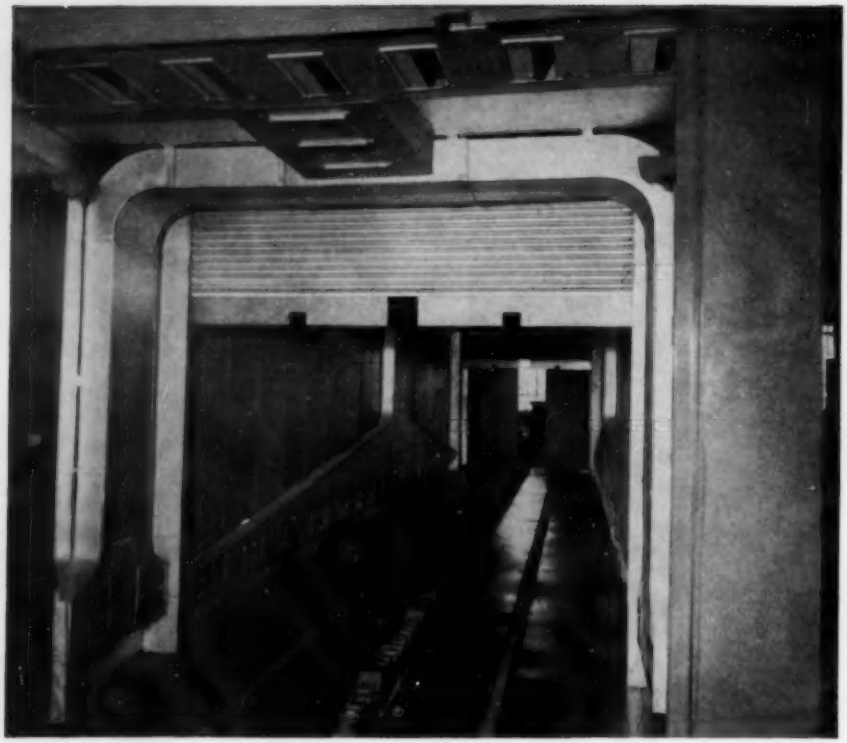
The automobile wheel finish, and consequently the enamel ring finish, must withstand severe road tests, therefore good adhesion is necessary. These rings may be scratched by contact with curbs or other objects. Should this occur, and if the ring surface were not phosphatized, creeping corrosion would certainly follow. Therefore the metal rings are cleaned and phosphate coated to increase the adhesion of the paint film, and as a dependable protection against rust in the same manner as automobile wheels, or for that matter, the entire car.

Power Washer; Surface Cleaning and Phosphatizing

Due to the wide variety in the size and shape of parts that we finish—some of which are sprayed,

By W. A. BARTSKI, Manager of Painting Plant
Parker-Wolverine, Division of Udylite Corporation

Wheel rings leaving the dry-off oven are loaded on platforms that have center colums to prevent the clean rings from sliding off as they are transferred to the finishing conveyor.



3-ZONE CONVEYORIZED FINISHING OVEN

Important operating economies are among the many distinctive features of this 3-zone automatic conveyor oven. Exhaust gases from the baking zone are utilized efficiently for work pre-heat. High velocity outside air, used in the cooling zone and there raised in temperature, is employed as pre-heated make-up air for the air heater.

Like all 101 *Equipment this installation is characterized by:*

- **Sound Engineering**
- **Expert Workmanship**
- **Operating Economy**
- **Maximum Investment Return**

This same system can be employed in many industrial oven applications.

If you have a problem in this field it will pay you to consult **101.**

- PAINT BAKING OVENS, BATCH AND CONVEYOR
- WELDING ROD DRYERS
- LITHOGRAPHING OVENS
- ARMATURE BAKERS
- CORE AND MOLD OVENS
- HEAT TREATING OVENS
- ROD AND WIRE BAKERS

INDUSTRIAL 101 **OVENS, INC.**

13821 TRISKETT ROAD CLEVELAND 11, OHIO

others dipped and still others roller coated—our power washer is on a separate conveyor line.

Wheel rings are placed on racks, 18 rings to a rack, in the fabricating department to go through the washer. In the first stage an alkali cleaner (0.09% conc.) is sprayed on the rings from four sides of the machine, and under 25-lbs. pressure. Temperature of the cleaner is 160° F.

This treatment is followed by a hot water rinse at 140° F. In the third stage a phosphatizing solution is sprayed over the parts at 160° F., followed by a cold water rinse. In the fifth stage a mild chromic acid solution at 140° F. is applied.

As clean, phosphate coated rings leave the power washer they pass through a dry-off oven for three minutes at 300° F. At the exit end of the gas-fired dry-off oven, operators wearing cotton gloves remove the rings and place them on specially built wood platforms, each of which has a center column to prevent the rings from sliding off.

Rings Are Conveyor Dipped in White Synthetic Primer

Clean wheel rings are transferred to the overhead monorial finishing conveyor. Two rings are suspended to a specially constructed fixture which holds them apart and supports them in the correct position for draining after they have been dip coated.

This conveyor has a U-dip which carries the rings down into a dip tank that contains a flat white synthetic primer. This material is kept at a viscosity of 18 seconds at 78° F., as measured in a No. 4 Ford cup. The primer is similar to the basic wheel enamel primer used on automobiles. [*To page 54*]

Spraying white top-coat enamel on face side of wheel rings. Note position rings for dip coating and spraying. Firm and rigid support assures proper drainage and easy spraying.

Top Coat Enamel Sprayed; Baking Follows

After leaving the dip tank, wheel rings travel by conveyor for four minutes over drain pans. This period of time allows for adequate draining as well as flash drying. Then the rings enter a pressurized spray room where the white top coat enamel is sprayed on the convex or face side of the ring only. This white synthetic enamel is used at a viscosity of 21 seconds at 78° F., as measured in a No. 4 Ford cup. Atomizing pressure used is 85-lbs. and fluid pressure is 15-lbs. A flash period of eight minutes is allowed before the rings enter a gas-fired convection oven where both prime and top coats are cured for 30 minutes at 290° F.

By dip coating the entire wheel ring, then spraying the top coat enamel on the convex or face side only, we obtain a dry film thickness of 0.6 mils on the concave or back of the ring, and 1.5 mils on the convex or face side. The reason for this is that the face of the ring and its receding edges will be subjected to the most severe conditions of the road. The finish on these wheel rings has been tested in several of the major automotive testing laboratories in the country and has passed their most rigid tests.

Industrial Finishing Show

The 1955 Industrial Finishing Show, feature of the 42nd Annual Convention of the American Electroplaters' Society in Cleveland, will be held in the Public Auditorium there, June 20 through June 23, 1955.

NEWCOMB-DETROIT

PIONEERS IN ENGINEERING, MANUFACTURE AND INSTALLATION OF

INDUSTRIAL OVENS
SPRAY BOOTHS
PARTS WASHERS
DUST COLLECTORS
AIR SYSTEMS

ESTABLISHED 1912
DETROIT DIVISION – GRAND RAPIDS DIVISION –
NEWCOMB INDUSTRIES LTD., WINDSOR DIVISION

For Bulletins and Quotations, Wire, Write or Call—
NEWCOMB-DETROIT
5753 Russell St.,
Detroit 11, Mich.
TR 3-2100

FOUNDATION
makes the difference

Put your finish on a sound phosphate base . . .

NORTHWEST INTERLOX

Interlox gives you a better, more corrosion resistant, more easily controlled phosphate base for your organic finishes. It exceeds most government specifications.

Interlox is a fine, dense grain coating developed for spray or immersion type baths—zinc phosphate or iron phosphate coatings. A very rapid depositing rate assures a high-quality, uniform coating throughout the unusually long life of the bath.

Got a problem? Let our cleaning experts help you!

For the complete story on ....erlox or any of the other Northwest Chemicals write or phone for a Cleaning Specialist.

LO HI pH

NORTHWEST CHEMICAL CO.

9310 ROSELAWN DETROIT 4, MICH.

pioneers in pH cleaning control *serving you since '32*

Paint Users' Tests; Be Fair; Get Results

BY J. P. GARDNER

IN A RECENT ARTICLE some remarks indicated criticism concerning the industrial paint sample business. Now would be a good time to suggest what should be done about it. Criticism without suggestion isn't worth much. Some of the figures shown in the previous article, "Industrial Paint Sample Business—Big Deal" (Sept. 1954 issue) obviously appear astronomical, but it is a point which can be argued.

The Tests You Made; What Results Have You to Show?

An industrial paint user's laboratory always appears to be behind schedule if the lab.'s work quota is based on the number of paint samples tested annually. The boys in that laboratory are not to be blamed when they make out their annual report and tell how many hundred samples they have tested. In the opinion of some, those reports indicate that a lot of work has been done. *A much better report to their management would be one showing the process improvements, or manufacturing improvements made as a direct result of their work.*

The real value of a laboratory should not be based on the number of samples tested, but on how the testing is organized with manufacturing benefits in mind. These could be either manufacturing cost reductions or product quality improvement without cost increase.

New formula changes are being made every day in the paint manufacturers' laboratories. These are brought about, to a great extent, through the development of new

Industrial paint users are advised to look for new developments in materials and methods of application; ask for and test only what will be useful in regular production and end use; limit tests to what the final finish will be called upon to stand; be honest and cooperative with suppliers; be practical, realistic and reasonable.

Production is increased and quality of the work is improved over former hand spray method

● When General Electric formerly hand sprayed their home laundry equipment—automatic washers and dryers—they painted 9.74 washers with a gallon of paint. Now, in the new and modern plant at Appliance Park, Louisville—where they're using the Ransburg No. 2 Process—they get 17.97 units per gallon of paint. An increase of 84%!

And, where they formerly got 5.49 dryers per mixed gallon of finish, now—with the Ransburg No. 2 Electrostatic Spray Process—they get 9.56 dryers per gallon of paint. An increase of 74%!

Along with increased production, G.E. is getting a more uniform, higher quality finish. Another typical, on-the-job-example of the unmatched efficiencies of the Ransburg No. 2 Process of electrostatic spray painting!

Want to know what Ransburg Electrostatic Processes can do for you in your finishing department? Ask about the complete facilities for test-painting YOUR products—under simulated production conditions—in Ransburg laboratories.

Ransburg ELECTRO-COATING CORP.
Indianapolis 7, Indiana

RANSBURG

"But, Mr. Elrod . . . if we cooperate with the manufacturer to reduce costs or improve quality, it'll slow the boys down!"

resins. This is real progress when compared with trying to copy their competitors' formulations.

Nearly every time a new resin is developed, most of the paint manufacturers attempt to formulate materials with it to the greatest possible advantage in performance. It is a good idea for the user's laboratory to develop a sensible testing program because his opportunity to make gains lies in these new and good developments.

The man in charge of the user's laboratory should not accept samples which he knows will never be tested; nor should he ever accept samples which he knows will never be used, regardless of test results. This can be difficult to do at times, but *we have no right to accept samples for which there is no hope.* It is a needless waste of money on the part of both parties.

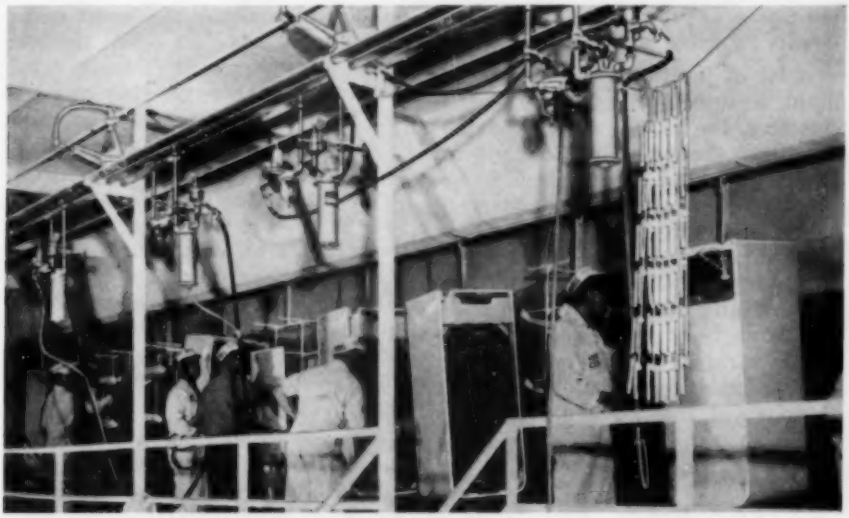
Be Fair in Making Tests; Strive for Improvements

A continuous and crying need exists for improvements in organic finishes. If we waste laboratory time with impossible materials, we deserve to be behind the times with new developments. We need help and if we are to expect the best help from our suppliers, let us be fair to them by being fair to ourselves.

More conscientious testing of paint system samples can mean more progress for us in our interesting and exciting field. We owe it to ourselves and to our suppliers to make conscientious evaluations of new materials, for in them may be the help that we all need.

Honest cooperation on the part of the user is soon noticed by the supplier, and so is the opposite noticed. We know the primary thinking on the part of the supplier. He merely wants to sell paint and he more or less knows what he has to do to sell it. Let us not confuse him regarding our intentions when we accept his samples for testing. It doesn't take long for a group of suppliers to sense the intentions on the part of the user. If he is fair, then the supplier's efforts can be concentrated on a good material rather than on some strange selling technique.

There is no value in testing paint unless it serves a purpose. If we keep in mind that our supplier has spent money, and we are going to spend money testing it, and we have an application problem facing us, then we will probably be able to do a better job. [*To page 60*]



CUNO FILTERS insure finer finishes at this appliance plant

Better finish, fewer rejects

in spraying and dipping operations

That's why more and more Cuno MICRO-KLEAN and AUTO-KLEAN filters are being selected by the finishing departments of such outstanding firms as Frigidaire, General Electric, Avco Manufacturing and Servel.

MICRO-KLEAN removes fine contaminants from spray paint; oil, moisture and scale from air lines. MICRO-KLEAN is also ideal for periodically cleaning dip tanks of sludge and other foreign particles.

AUTO-KLEANS remove skins, dirt, chips and scale before they harm your finish. Contaminants collecting on strainer are removed without stopping flow — either by motor drive or manual turning of handle.

Let us help *you* get finer finishes at lower cost. Write Cuno Engineering Corporation, Dept. 29, Meriden, Conn. 4.15

CUNO ENGINEERED FILTRATION

How to Prepare For and Begin a Series of Tests

A lot of preliminaries enter into paint testing. The base metal, the cleaning, the phosphating, and the handling should all be of known standards, and they should be equally well known to the man who makes the paint.

The combined resources of our paint suppliers is something that we shouldn't overlook. We can have the value from those resources by being careful, by having a plan, and by being fair to all contenders for our valuable business.

We should schedule our testing programs for the best advantage.

Testing protective coatings in laboratory. Photo from Tennessee Eastman Service Lab.

All chosen contenders for our business should have an equal chance. When they know that their competition is real tough, they are going to do the best they can, and it is all to our advantage.

It costs less to test a group of ten samples than it costs to test two groups of five each. It is always better to pause and think out a testing program; this is better than to rush in with frequent comparative evaluations. There are too many little variables in paint testing to justify numerous testing programs.

There is exactly one way to select the substrate material to be used for a finish system film evaluation. Representative stock from one shipment of raw material should be used. All panels to be cut for use for comparison testing should be cut at one time. Enough panels should be cut to fill the entire needs for the testing program and sufficient extra panels should be available for the paint suppliers' check testing program.

Select Identical Panels for Making Paint Tests

All panel stock for the program should be cleaned and treated in production equipment at the same time. There are variables in different shipments of steel, in the different cleaning equipment, and even in the time of day that the parts are processed. Storage time of treated sample stock is another variable to consider. Any one of these variables is great enough to throw a testing program into confusion, so far as test results are concerned. [*Cont'd on page 62*]

is your paint department a problem child?

- Are you getting consistent finishing room quality control?
- Are you satisfied with the appearance of your finished product?
- Are rejects throwing your costs out of line?
- Are time and material costs eating up your profits?

We have the answers...

From TV sets to kitchen cabinets, from water heaters to new automobiles, Spee-Flo engineers from coast to coast have an enviable record of assisting manufacturers with their "problem child"—the paint department.

Paint department headaches will disappear with Spee-Flo Hot Spray Heaters. Production costs will drop and consistent, all-weather quality control will be established.

We'll be glad to show you facts and figures on how other manufacturers in your field are producing better products at lower cost. Spee-Flo Hot Spray Heaters pay for themselves in the first few weeks of operation... they are long lived and trouble free.

LET US GIVE YOU AN ON THE JOB DEMONSTRATION

The SPEE-FLO CORP.
HOT SPRAY HEATERS
720 POLK AVE.
HOUSTON 2, TEXAS

THE SPEE-FLO CORP., Dept. 3x-6 720 Polk Ave., Houston, Texas
Builders of practical industrial and automotive hot spray equipment.
Please send me information on your line of hot spray heaters best suited to our work. Type of products being finished_____
Application is conveyorized____ turntable____ mobile____ other____
Average volume of material per gun per hour_____
Type of material_____ Please have representative call_____
Name_____
Company_____
Address_____
City_____ State_____

5304

Why User's and Supplier's Labs Should be Cooperative

After the test pieces have been carefully prepared, they should be wrapped and divided between user and supplier so that accurate parallel tests can be made. By running parallel tests many arguments can be avoided, and this procedure also provides a means by which the proper function of testing equipment can be determined.

It is also a good idea for both laboratories to exchange the finished test pieces before any tests are run. This is an additional check on the sample preparation and on the baking cycles used in both places. The supplier should also be given a few test pieces cut from prevailing production so he will know that specifications are being met in production. This will be helpful in avoiding future arguments.

"Until the user cooperates with us I want you men to work on new selling techniques. Now, Wilson—our chief lab technician—will demonstrate his latest sales gimmick."

We should give our test results to our supplier as they will mean something important to his formulators. He prefers strict numerical values derived from instrumentation. A noted failure is meaningless unless he knows just how badly it failed and how it compares with other finishes tested. In the event that the values spell failure, the supplier's investment is at least partially protected to the degree that he can continue his development intelligently and ultimately to our own advantage.

Any user who does periodic group finish testing should make known to his chosen group of suppliers his complete testing and evaluation procedure. This should be accomplished by an accurate copy of his complete performance specification.

What Tests to Make and Which to Keep Separate

When preparing or listing the various tests to be conducted, applicability and appearance tests should not be a part of the grading procedure. They should be conducted separately or assumed, since there would be little point in making tedious film evaluations if the material were not applicable by the process involved, or if it were not capable of producing the desired appearance.

It has been a matter of habit, in some cases, for a user to attempt to specify some of the material ingredients, or to otherwise tell a paint manufacturer how to make

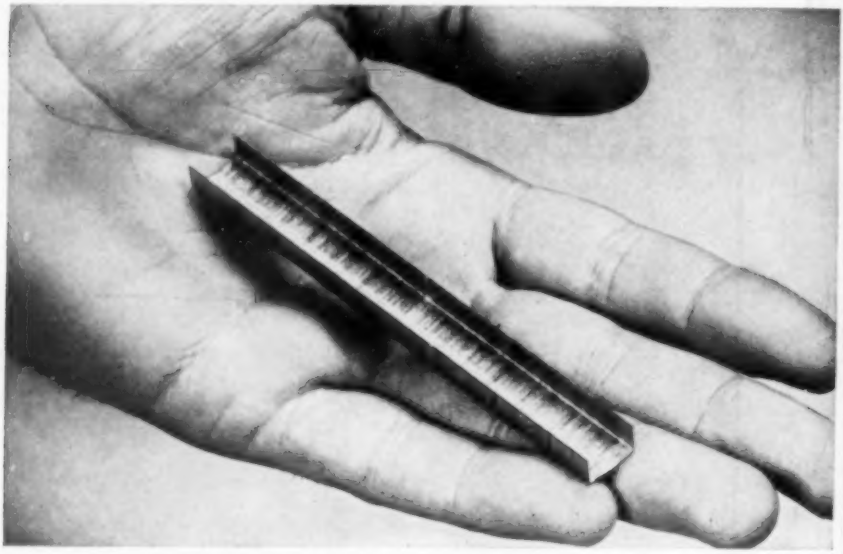
Automobiles and Accessories
Baby Furniture
Clothes Hampers
Doll Carriages
Electric Appliances
Farm Equipment
Gas Tanks
Heaters
Ice Boxes
Jacks
Kitchen Cabinets
License Plates
Machinery
Novelties
Office Fixtures
Playground Equipment
Quonset Huts
Rubber Footwear
Stokers
Trucks—Trailers
Unloaders
Ventilators
Wood Furniture
X-Ray Machines
Yachts
Zoning Paints

A TO Z

For 79 years the top quality of O'Brien Industrial Finishes has been proved in American industry. Our constant research and broad experience can be of benefit to you—whatever product you make. The O'Brien Corporation, South Bend 21, Indiana.

O'BRIEN

INDUSTRIAL Since 1875 FINISHES



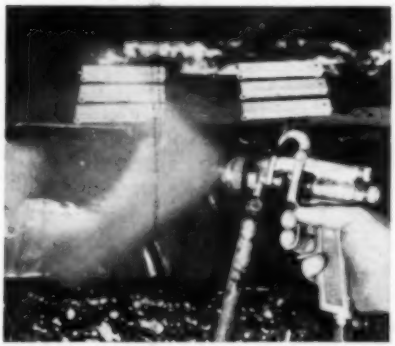
A SPECIALLY FORMULATED Du Pont DUCO lacquer has the unique combination of properties needed to hold this cartridge of staples firmly together for easier, surer reloading . . . yet release staples instantly when stapler is used.

Staple lacquer that knows when to let go

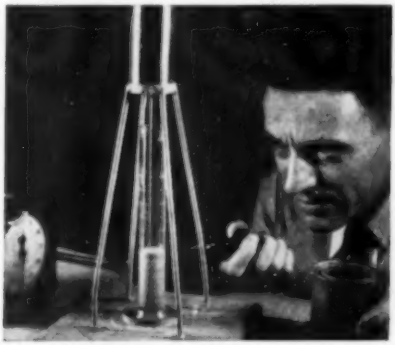
Perhaps you remember when reloading a stapler was a tricky business. Coping with a cartridge of several hundred staples that just wouldn't stick together properly usually resulted in lost time *and* lost staples. The reloads were slow, difficult, and costly to manufacture, too.

Coating the staples with a specially formulated Du Pont DUCO® pyroxylin lacquer cement changed all this. Now staples are held together firmly yet release freely. As a result, today's staplers are in universal demand, performing an ever-increasing variety of services more efficiently and economically.

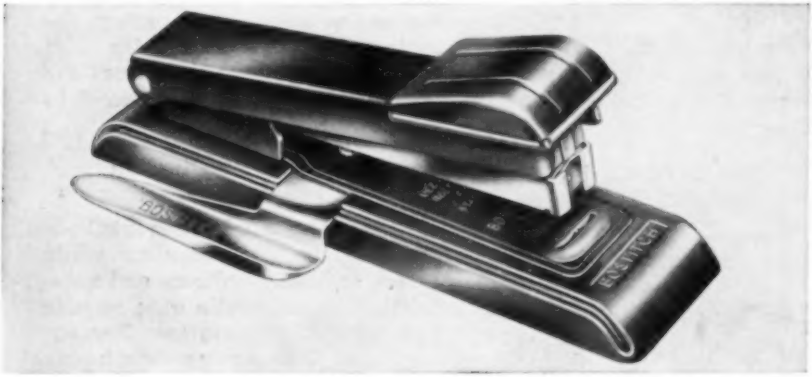
This success typifies the vital contribution the right application of a tailor-made Du Pont finish makes to the sales future of thousands of products. Perhaps a Du Pont finish can help you develop a new product—improve existing products—boost efficiency. Contact the Du Pont sales technician in your area, or write E. I. du Pont de Nemours & Co. (Inc.), Finishes Division, Wilmington, Delaware.



STAPLER PARTS coated with Du Pont DULUX® enamel resist hard knocks for years.



THIS DEVICE helps Du Pont chemists measure and control finish viscosity.



EYE-CATCHING BEAUTY of Du Pont DULUX enamels means added sales appeal for this stapler.

Du Pont Industrial Finishes

Chemically engineered to do the job *better*

DU PONT

REG. U. S. PAT. OFF.

Better Things for Better Living
. . . through Chemistry

DUCO AND DULUX ARE REG. U. S. PAT. OFF.

paint. This would be on a par with a paint manufacturer telling a user how to build his product, which, of course, is not advisable.

There should be more common sense applied by the finish user in terms of those tests that closely parallel field performance, and more particularly in those tests where some known correlation exists between field performance and accelerated laboratory testing. Production standards on which we have some field performance knowledge should always be included in new film evaluation tests.

Hide Identity of Brand Paints By Using Code Numbers

The idea of using only code numbers on paint samples and test pieces is gaining in popularity.

"To be fair, we'll remove your labels from the samples and write code numbers on them in large black letters, except—out of respect to American Womanhood—Miss Turpin's samples will be in red letters..."

When all samples to be tested have been collected, identification labels, etc. can be removed and a code number substituted. It would be unusual indeed if we didn't have a mental picture of the supplier's representative during sample preparation unless the labels were first removed. This idea also serves to convince the paint suppliers of the user's good intentions.

All evaluations on all samples involved, including application of numerical values and sample place rating, should be made before decoding is done. In some instances coded test results are submitted to the engineer in charge before decoding is done. This idea also serves to keep the wolves from the door until the user is prepared to announce his findings.

Consider Paint Application Methods Too When Testing

Some paint application methods are variable in results, while others are more uniform and automatic. The automatic ones require finer sample preparation. For example, if flow-coating or dipping is the user's process of application, he should include film thickness variables in his test evaluations.

There are cases where product end use is unusual and will not accommodate standard testing methods. In such cases special tests and special testing equipment should be developed and used. In fact, it is generally agreed that many of the standard paint test methods should be revised. This, of course, includes testing equipment.

When the various tests to be conducted, with the exception of

Lacquers · Sealers

Lacquers and Sealers in a wide variety of specifications. High or low solids. Glossy or flattened. For hot or cold spraying, for dipping or for special application methods. Tested for durability.

•

STAINS

GLAZES

FILLERS

SHELLAC

ENAMELS

UNDERCOATS

SPECIALTY FINISHES

•

IN STEP WITH THE TIMES

JAMES B. DAY & CO.

CHICAGO 14

applicability and appearance, have been established, they should be listed in the order of importance and a percent value should be placed on each test. These percent values should then total 100%. Then a floor limit percent value should be applied to each rated test to avoid a high performance rating on a material that has one or more dangerously low properties. The aggregate of floor limit values should represent the lowest acceptable performance value.

Test Results That You Can Measure for Comparison

Instrumentation cannot be conveniently applied to all tests without some special numerical formula because some test results are not instrument measured. For example, humidity normally is an appearance evaluation. It is possible, however, to break down the results of humidity tests into components which can be instrument measured. It could be broken down into several components as follows:

1) Blistering.
2) Film softening.
3) Color change.
4) Gloss change.
5) Recovery.

Items 2, 3, 4 and 5 can be readily measured with existing instruments. As for item No. 1, the actual blister free area in a preselected area could be calculated and the results given in a useful numerical value.

"After many completely fair and impartial tests, we have decided that Miss LaBlah, here, is the prettiest . . . er, represents the best product. . . . ."

Evaluation of Salt Spray and Film Thickness Tests

Another instance where many errors have been made is in the avaluation of salt spray test results. Some of those who evaluate these tests are chiefly impressed by the staining of the finish while others consider only rust creepage beyond the scribe mark. It is generally agreed that rust staining has little importance in the field since such acceleration is seldom encountered. The rust creepage should be carefully measured and given a numerical value after all loose film has been mechanically removed.

There are many ways in which test specimens can be prepared insofar as paint application is concerned. Since film thickness variation plays such an important part in sample performance, the mechanical applicator, such as a drawdown bar appears to be gaining in popularity. With a little practice, an operator can apply a uniform film

SPRAYON "PUSH-BUTTON" TOUCH UP

touch up your products anytime, anywhere... factory-perfect job every time!

YOUR OWN FINISH FROM YOUR OWN SOURCE

In use by industrial leaders in every field, the Sprayon Self-Spraying Touch Up Tool ends your touch up problems. Protect the eye-appeal of your product—get an extra bonus of customer satisfaction—and do it with big savings in time, cost and equipment investment! Sprayon goes right to your source for your own touch up finish, custom-loads the Tools for you under your own label. Exclusive Sprayon features mean even unskilled help do a factory-match job in minutes...for pennies. Use it anywhere—from your own production line to the final customer. Nothing else to buy—it's a disposable low-cost constant-pressure spray gun—a complete paint shop in a can!

WRITE TODAY FOR YOUR FREE "PUSH-BUTTON" FOLDER

SPRAYON PRODUCTS, INC.

2075 EAST 65 STREET
CLEVELAND 3, OHIO

SPRAYON *Self Spraying* TOUCH UP TOOL

having less than one tenth of one mil variation from top to bottom of the test panel. This appears most logical since our principal desire is to learn about the film properties under ideal conditions for the sake of comparison.

All data pertinent to careful study should be supplied with the paint sample to include theoretical coverage, as well as other information such as weight per gallon, percent solids, etc. This information is important and is combined with performance data when a supplier is selected.

Various degrees of film failure may be noticed near the test panel edges. The practice of edge protection is gaining in popularity. Narrow plastic tapes in all colors are available for this purpose. Some laboratories further coat the edges after the panels have been prepared. The use of paraffin for edge protection is not recommended for reasons of contamination both on the test piece and in the various testing equipment.

Testing Film Adhesion and Hardness or Pressure Resistance

New instrumentation is needed for testing such characteristics as adhesion and hardness. In reference to adhesion, we want to know how much energy is required to pull off the finish from a given area of the substrate. It appears that a pocket knife is still the most popular instrument for adhesion measurement, but unfortunately accurate numerical values cannot be applied. Present hardness measurement instruments actually measure surface texture differences more than hardness. Perhaps "hardness" may even be the wrong word description for what we want to know. We want to know if outside pressure is going to damage the finish. Perhaps "pressure resistance" is a better description than hardness.

After the various tests and evaluations have been made by the user he should compare notes with and consult with each of the contending suppliers. Experience indicates that the supplier is really easy to get along with once he is convinced that the user's attitude is a fair one. Those suppliers whose business approach is based on quality materials will definitely like the idea.

Carefully conducted testing programs, in which instrumentation and numerical evaluations are used, usually result in a choice of suppliers which have been approved. This will then also allow the purchasing agent to do an intelligent purchasing job which, in the past, has been very difficult and confusing insofar as industrial paints are concerned.

Conveyor Lubricators

A revised 6-page catalog of Fauver Automatic Conveyor Lubricators is offered by J. N. Fauver Co., Inc., 51 W. Hancock, Detroit 1, Mich. It is identified as Catalog No. CL849.

Instant Floor Patch

A new 4-page manufacturer's circular describes "Duropax Instant Floor Patch," which supports traffic immediately after application. The product features listed include stable, freeze-proof storage qualities, and non-shrinking, age-strengthening characteristics. Complete description supplied on the simple method of application. Write Tile-Tite Corp., Box 395, Station D, Cleveland, Ohio.

AVALEX SETS 8 YEAR RECORD!

For deluxe furniture finishers!

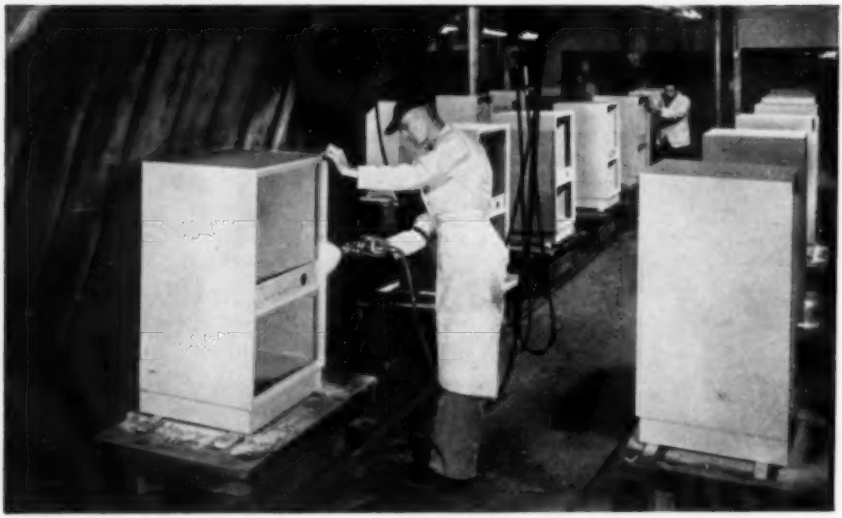
Not a single reject due to finish in eight years! That's the remarkable record piled up by Decorolac Inc. of Jamestown. Decorolac is famous throughout the trade for custom finishing and hand decoration of furniture and TV cabinets. Decorolac has found that "putting all your eggs in one basket" really pays off when it comes to wood finishes. They use Avalex all the way — Avalex stain, fillers, sealers, shading stains and lacquers. That way the responsibility rests solely on us . . . and we like it that way. May we help you with your finishing problems?

JAMESTOWN FINISHING PRODUCTS, INC., Jamestown, N. Y.

Makers of

AVALEX LACQUERS, ENAMELS, STAINS, VARNISHES AND OTHER INDUSTRIAL USES.

The efficient exhaust of this DeVilbiss water-wash booth makes it ideal for high-speed spraying of Magnavox components.



DeVilbiss spray gun gives operator a wide pattern at normal pressures. Fewer passes mean less painter fatigue.

BRANCH OFFICES AND DISTRIBUTORS IN PRINCIPAL CITIES THROUGHOUT

The secret of those magnificent finishes on Magnavox

Magnavox uses DeVilbiss guns to spray stain, sealer and finish coats.

The Magnavox Company, Fort Wayne, Indiana, turns out cabinets famous for eye appeal. Painstaking care – some cabinets receive seven finishing coats – and DeVilbiss spray equipment maintain top quality for Magnavox.

Magnavox uses a variety of DeVilbiss spray guns, booths, hose, connections and other accessories. Guns, for example, spray stain, sealer and finish coats. Their ball-and-cone principle of fluid tip and air cap centering assures a perfect spray pattern of uniform quality and fine atomization. Lightweight and finely balanced, they adjust exactly to the pattern desired.

The result is smooth finishes with greater depth, more uniformity. Painters are able to get uniform coverage because of the wide, even spray pattern. Result – fewer passes, less painter fatigue.

You can get complete data on DeVilbiss spray guns and other DeVilbiss equipment for high-quality finishes from your DeVilbiss jobber or our nearest branch office. Call today, or write direct to the factory.

THE DEVILBISS COMPANY
Toledo, Ohio

Barrie, Ontario • London, England
Santa Clara, Calif.

FOR BETTER SERVICE, BUY
DEVILBISS

THE UNITED STATES, CANADA AND THE WORLD

Technique of Handling Color Flecked or MULTICOLOR FINISH

BY NORMAN I. GAYNES

ONE OF THE revolutionary and interesting developments in paint technology, in recent years, has been the multicolor or color flecked finish for both industrial and architectural use. This material is only in its infant stage, and lack of adequate information regarding its handling and usage has caused much irritation among both manufacturers and potential users.

About the Make-up of Multicolor Finishes

The multicolor finish is now being manufactured by a number of prominent paint companies, and naturally enough, their individual formulations are kept somewhat of a secret, but the basic concept, for most, are very similar if not the same.

Most paints, lacquers or enamels are composed of the pigment, vehicle and solvent components. This new material, however, is actually a 2-phase vehicle; that is, a special type lacquer enamel vehicle suspended in the primary water emulsion vehicle. In this suspension, the lacquer enamel is carried in the form of spheroid particles the size of which is controlled by the manufacturer to suit various customers' individual needs.

Rigid control must be exercised over the specific gravity of the lacquer component, because, should the specific gravity be less than that of the water solution, "floats" will occur. In other words, the lighter material would float on top of the water solution and give undue prominence to that particular particle. In most instances, this is highly undesirable. A quality multicolor enamel contains particles of the same specific gravity so that the proportion of each is maintained through the spray gun and on to the surface being finished.

There is one disadvantage to the use of this new product. At this time I know of no multicolor material that enjoys a package life stability of greater than one to three months. This necessitates practically a custom finish for each purchaser.

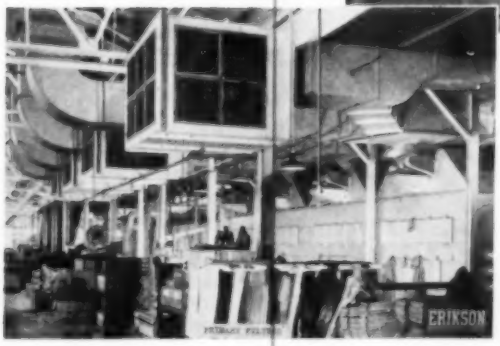
Mix it by Vibrating or Special "Boxing" Technique

The proper handling of multicolor enamels would do a great deal in alleviating some of the problems encountered. It cannot be emphasized too strongly that this type of material should not be stirred with any kind of mixing rod inserted directly into the pail. The danger from this procedure is twofold. In

ERIKSON *builds to your requirements*

40-Ft. Down-Draft Paint Spray Booth

Interior View



Primary Filters

This custom designed and engineered booth features:

- **Primary and secondary filtering of supply air from within plant . . .**
- **Saves costly air filtering and heating apparatus in addition to booth . . .**
- **Equipped with highly efficient water wash exhaust units on both sides—no cross drafts—fully approved by air pollution control authorities—absolute minimum maintenance.**

Since "catalogued" equipment will rarely meet the exact requirements of modern finishing operations, our engineers are available to work with you in the design of this and other paint finishing equipment for your specific needs.

ERIKSON

MANUFACTURING COMPANY

P. O. Box 522-D, El Monte, Calif., Phone CUmberland 3-3735

Spray Booths · Air Washers · Flow Coating Machines · Fume Incinerators

cold weather, particularly, the particles might be cut to a much smaller size. Secondly, there is extreme danger of causing a merging between the different colored particles, thus destroying the desired color flecked effect.

There are two acceptable methods of mixing the multicolor finish. Use of a mechanical vibrating shaker has given very satisfactory results. Where this equipment is not available the correct method of "boxing" should be used. This will consist of pouring the loose liquid solution into a separate container and stopping just as the heavier material is ready to pour. The light solution is then returned to the original vessel in a vigorous pour, so that a mixture of the heavier material and the water emulsion begins to take place. This action should be repeated continuously until a thorough mixing occurs. Depending on the age of the multicolor, six to ten pourings may be necessary.

"He calls me his sparkling metallescent finish and I call him my large can of solvent."

At first glance it may seem that too much time would be lost by following this stringent procedure, but the user can be assured that the end justifies the means, for many beautiful and interesting effects may be obtained.

Storage of multicolor enamel should be such that extreme ranges of temperature are avoided. Freezing will cause merging of the particles, while a heat of 110° F. or more would probably cause coagulation or jelling in the containers.

Spraying Technique to Produce Best Results

Equipment used in the spraying of the multicolor finish differs somewhat from that used on clear and solid color lacquers or synthetics. Suction type spray guns cannot be used. The best results are obtained with a pressure tank setup. For the most part, this specialized equipment is standard stock with all major producers of spray equipment. Multiple color enamels can not be applied by brushing.

Variations of pattern can be accomplished by slight manipulation of the air and fluid pressure regulators on the spray tank. For normal application, equal air atomizing pressure and fluid pressure are recommended. Lowering of the atomizing pressure and fluid pressure are recommended. Lowering of the atomizing pressure to approximately 10-lbs. below that of the fluid pressure will give the largest particle size. Thus, where mate-

● Customers appreciate our prompt and efficient delivery service. Regardless of factory location in the southeastern states, immediate delivery of such quality materials as lacquers, sealers, fillers, toners, glazes, NGR stains and pigment wiping stains by our own trucks, is an outstanding feature of Snyder Brothers service.

You want good service!

You expect good service!

You get good service!

● Here at Snyder Brothers, we recognize that good service is all important, especially in connection with formulating, manufacturing and supplying product coatings. Accordingly, our business has grown tremendously, and we have become well-known throughout the area. We've become acquainted with customers' needs—they depend upon our staff of experienced men for expert advice and help on practical finishing problems and the styling of colors for new items. If you would like this kind of service, write, wire or phone us—no obligation.

Snyder

BROTHERS COMPANY

Manufacturers **INDUSTRIAL** *of Quality* **LACQUERS**

P. O. BOX 548 — TOCCOA, GEORGIA

rials, as received from the manufacturer, do not seem to match previous batches, slight variations in the pressures will sometimes overcome this difficulty.

Spray technique is important. A fully opened gun trigger with the widest possible fan spray will give speed and a very satisfactory application of multi-color finish.

Selection, Testing and Purchase of Multicolor

The purchasing of multiple color materials should be done on the same basis as the selection and buying of any other lacquer or enamel. The color may be the same but the results we hope to achieve will naturally vary with the individual material. The properties that we would normally expect in standard type finishes should be expected with multicolor. Hardness, flexibility, washability, mar resistance, etc.—all should be checked as any purchaser or finisher would check the shipments he received of other conventional finishing products. Manufacturers should be advised of the properties being sought for the particular application.

Adequate ventilation should always be provided for any spraying operation. However, because sprayed multicolor is not generally atomized, less ventilation and air circulation are needed. Little or no spray dust is produced; a decided advantage in architectural painting.

Colors and Patterns in Great Decorative Variety

The number of colors, patterns and combinations obtainable are infinite. The particles can be blended and combined in such manner that simulated effects of leather, cork, granite, etc., are produced.

In its short duration, this new type finish has found use in television, toys, tools, furniture and room decorating. It is naturally expected that greater uses will be possible as more time and study are put into further developments.

It cannot be too strongly emphasized that reliable manufacturers should be consulted for the purchase of this multicolor finish. If the principles of handling, given here, are followed, the excellent results obtained will be of great satisfaction to the user.

O'Brien Corp. Buys Goldberg Paint Co. in S.F., California

The O'Brien Corp., South Bend, Ind., Baltimore, Md., and Oklahoma City, has acquired the Garrett M. Goldberg Paint Co. of San Francisco, Calif. This transaction provides O'Brien with facilities for the manufacture and distribution of paint to all parts of the United States for the first time in its 79-year history.

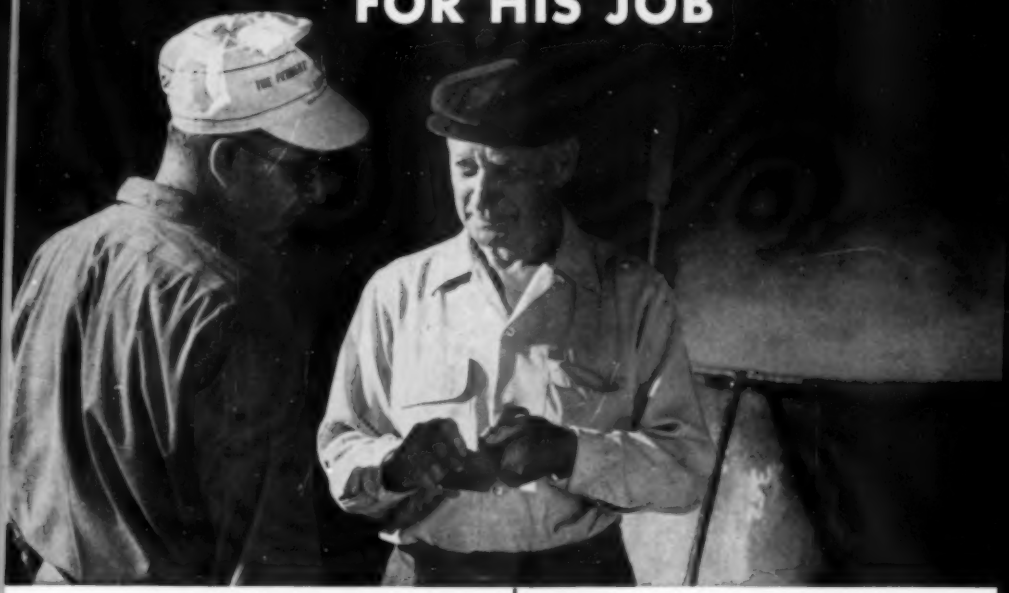
William D. Lewis has been appointed General Manager. Lewis, formerly an O'Brien Trade Sales Manager, says that the complete Goldberg paint line will continue to be manufactured and distributed to all existing customers. Leading items in the O'Brien line will gradually be introduced to West Coast dealers.

Garrett M. Goldberg, retiring owner, founded the company in 1906. He is a brother of "Rube" Goldberg, the famous cartoonist, and is a widely known and respected figure among paint manufacturers in all parts of the United States.

At the conclusion of the transaction Mr. Goldberg said, "I am sorry that my health dictates I must end my association with this company, but I am glad to turn over its running to the O'Brien Corp., a long-established and highly reputable company."

Acquisition of the Goldberg facilities marks the third major extension of O'Brien in the past seven years. In 1948 a plant was purchased in Baltimore, Md. In 1953 the Eagle-Picher Co.'s paint plant in Oklahoma City was acquired.

VARNISH BOSS WITH A FEELING FOR HIS JOB



"Bodying" the oil is one of the many processes supervised by William L. (Bill) Walters, Chief of the Oleo-Resinous Department at Ferbert-Schorndorfer.

He is shown "touch-testing" the thickness of a linseed oil batch. A sample of hot oil is taken from the kettle and applied to a putty knife. Perhaps it is "done"; maybe more cooking time is necessary. In any case, Bill's educated finger tips reveal the answer . . . with laboratory accuracy.

Today, Walters, a 32-year F-S veteran, works beside his son, Warren (also shown above) who is following in his father's footsteps as a varnish maker.

There is no substitute for experience. Bill Walters is proof of that . . . for he and many others like him pour their years of knowledge and experience into the F-S product finishes so highly respected . . . and specified . . . by manufacturers of quality products.

Let F-S help solve your paint or varnish problems . . . write or call.

THE FERBERT-SCHORNDORFER COMPANY

A DIVISION OF AMERICAN-MARIETTA COMPANY

12815 Elmwood Ave. F-S **Cleveland 11, Ohio**

Die-Cut Adhesive Masks

One of my customers wants to get masking tape in small die-cut pieces, such as is referred to on page 85 of October 1954 issue. Please let me know where we can obtain them.—*W. S. T.*

In a letter we are submitting three sources of supply.—*Editor.*

Coating Small Metal Items

In regard to the small buckles with prong and roller, used on ladie's shoes and the like, while in the past these have been plated, we understand that the general trend in America is to enamel these items, and the fashion in this country is to follow suit.

While we believe these buckles will be treated in a rotary barrel, we are wondering if you can give us any information in regard to the treatment, amount of lacquer used, temperature, tilt of barrel, etc.—*F. J. Ballard & Co., Ltd., London, England.*

The items you mention can probably be coated in bulk in centrifugal (dip-whirl) machines or in tilted tumbling barrels. In a letter we are naming manufacturers of such machines; once they see some of your samples they can advise you about all the details of coating your product quickly, economically and effectively.—*Editor.*

About Flow Coating

We have read several accounts of the growing use of flow coating. We are familiar with the general principles of this process, but, as we feel that it might be applied to some of our products, we are eager to obtain fuller details if these are available. —*P. C. & Co. (England).*

We are happy to refer you to Oct. 1954 issue of this magazine, see pages 118-122.—*Editor.*

Coating Wood Turnings

I am seeking information on how to economically finish wooden sticks in volume production. Some are round and slightly tapered to simulate colored candles; dimensions 15½-in. long by ⅞-in. and 11/16-in. in diameter. Any information will be greatly appreciated.—*G. G.*

I suggest you arrange "pin racks" and dip them in multiple, either by hand or mechanically. In a letter we are naming several manufacturers of dipping equipment.—*Editor.*

Portable Roller Coater? Yes We Have It

In October issue, page 113, I have read with interest an article entitled, "Make the Roller Coater a Portable Machine." For several years we have built our coating equipment with optional casters so that the machine can be easily moved from one line to

Does your product demand a

WHITE FINISH?

United's White Bake Enamel combines, in one finish, all the essential requirements you may need. It offers high light reflectivity, chip resistance, durable color retention, and resistance to food acids, detergents and other household chemicals—plus maximum hide-ability. If your product demands a white with these qualities, you ought to investigate United's White Bake Enamel.

Another white worth investigating is United's White Undercoat. With perfect adhesion to most metals, and outstanding filling qualities, it is ideal for use on castings. It air-dries or bakes.

You can get samples of both of these quality whites by writing. Why not ask for them today?

Complete Research Facilities AT YOUR SERVICE

If you are faced with a special finishing problem, the United laboratory will gladly assist in finding a solution. These research facilities are always at your service to help make a better product.

PAINTS • SYNTHETICS
UNITED
LACQUERS • ENAMELS

United LACQUER MFG. CORP.
LINDEN, N. J.

another. We have also built several units where the base is built to fit the contour of a fork truck for easily moving the machine. We thought this might be of interest to your readers. —*The Union Tool Corporation.*

"Hello, dear . . . I'll just snatch a kiss and run along!"

Electronic Spraying; Laboratory Size

On various occasions we have seen reference to electronic spraying in this magazine. We are interested in the possible purchase of laboratory scale equipment for experimental purposes, in this direction. We shall be pleased if you will supply us with the names and addresses of companies manufacturing small scale equipment of this order.—*A. P. & C., Ltd., Madras 11, India.*

We are not sure whether such equipment is available. In a letter we are suggesting concerns to whom you might write about this.—*Editor.*

Graining Equipment

We are looking for a method by which we can obtain reasonably authentic reproduction of wood grains, such as limed oak, birch, etc., on casework made of either plywood or composition type boards, such as masonite.

Recently we saw a television cabinet (Zenith) made in this manner, which was an excellent job. Can you give us the names of manufacturers of the coating and printing equipment to perform this type of finishing job? —*X. Mfg. Co.*

In a letter we are giving you several sources of supply . . . all of which are advertised from time to time in this magazine.—*Editor.*

Vacuum Metallizing

We are interested in getting the names of companies who do distillation in vacuum metallizing on plastic. Any information you can give us will be apperciated.—*M. Mfg. Co.*

Off hand we know of Stokes Machine Co., Eastman Kodak Co., and National Research Corp. In a letter we are giving you the addresses of these concerns.—*Editor.*

Temperature Recording Papers

We have been advised that a company in the United States, believed to be known as the Paper Thermometer Co., is offering a range of temperature recording papers which are stated to be accurate within a few degrees Fahrenheit in the normal paint stoving [baking] temperature range, for example, around 250° to 300° F.

We are interested in these temperature recording papers and will be

It happens every day...

EVERYTHING GETS

"REPAIRED"

BUT THE FINISH

Engineers at Moline Pressed Steel recognized the inquisitiveness of youngsters when they designed their "Buddy L" Repair-It Unit . . . a sturdy truck, complete with jack and tools to encourage mechanical aptitude. These designers did not overlook the relentless beating the finish would take during tune-ups and tire changes. As with all Buddy L steel toys, Moline turned to the Arco Laboratory for a special boy-resistant finish . . . one which would withstand ordinary, everyday "repairs".

Your finishing problems are undoubtedly unusual . . . as are those of so many product designers. Why not place them in the hands of experienced formulators at ARCO . . . experts who tailor quality paints to exacting specifications . . . and pre-prove performance by Arco Cycle Testing, a system which evaluates finishes to a degree unequalled in the industry. Write for full details.

ARCO PAINTS
Quality... SINCE 1881

TESTED FIRST TO LAST!

THE ARCO COMPANY • 7301 BESSEMER AVENUE • CLEVELAND 27, OHIO

grateful if you put us in touch with the manufacturers, whose address we are not able to obtain in South Africa.—*A. E. & C. I. (Paints) Ltd.*

We are not familiar with temperature recording papers, but there are temperature recording sticks, paints and pelletts—all made and sold by Tempil® Corp., 132 W. 22nd St., New York 11, N. Y. We believe these products will suit your requirements better than any kind of paper.—*Editor.*

Painting Many Boats

We are interested in getting whatever information may be available regarding the finishing of wooden boat hulls of all types, on a production line basis.

The references we have found, deal with finishing schedules more suitable for a craftsman than for an industry handling a large number of hulls in a limited storage space.

Any help you can give us will be much appreciated.—*O. L. (Canada)*

In a letter we are sending you tear sheets of an article, such as you want, from a back issue of this magazine. —*Editor.*

Control of Overspray

I would like to get a reprint of Mr. C. B. Rowe's article on the control of overspray in your July issue, pages 32-48. I also would like to have the names of any manufacturers of overspray paint filters.—*R. R. (Designer).*

No reprints are available now but we are sending you a complete copy of July issue which contains the article. For companies that make and sell overspray paint filters, see Oct. 1954 issue, pages 43 and 83.—*Editor.*

Anti-Corrosive Oil

We are interested in obtaining information regarding Anti-Corrosive Oil which can be sprayed on steel plates, bars, shapes, etc., to be stored in the open.

We would appreciate your help in putting us in contact with suppliers of Anti-Corrosive Oils which are sold for this purpose.—*G. Co. (Cars and Railway Equipment.)*

Try Shell Chemical Corp. or The Solvents & Chemicals Group, whose full page advertisements appear in every issue of this magazine.—*Editor.*

"It's not necessary to stencil that underneath, Miss LaFarr!"

To Chip off Heavy Coats of Old Paint

I have a marine account interested in a mechanical device for chipping paint off the hulls and decks of boats. This machine could be either electric or pneumatic. It should be a small

Mac's FASHION FINISHES

LACQUERS

Available in clear and opaque, for application to surfaces of all kinds. Spread easily and give good coverage. Any sheen desirable. Attractive, outstanding finishes.

SEALERS

Ideally suited as first coat materials under clear gloss or flat lacquers. Give good body and sand easily. Also, work well under varnish and enamel! Try them!

VARNISHES

None better! Whether for dull, satin or gloss effects, Mac's varnishes will be found most economical and appropriate as finishing coats on low, medium and high priced goods.

STAINS

These are stains of distinction, with an established reputation for the highest quality. We've been making them since 1875. Mac's stains can be supplied for every need.

FILLERS

The Mac's Fashion line includes the more commonly used oil paste fillers as well as the quicker drying materials of recent development. Keep abreast of the times with Mac's fillers.

PRIMERS

Mac's Fashion primers insure full coverage and absolute protection as first coaters on metal, forming firm and lasting foundations on products subject to severe treatment and abuse.

ENAMELS

For wood, metal and other surfaces, air dry or bake. Mac's Fashion enamels, properly applied, stand up under all conditions to which painted articles are subjected.

WOOD BLEACH

Mac's Fashion bleach will bleach all kinds of wood including mahogany. Dries overnight to a definite bleached effect ready to sand, and ready for the regular finishing schedule. Samples on request.

THE LAWRENCE-McFADDEN CO.

Write for Production Test Samples

7430 STATE ROAD PHILADELPHIA 36, PA.

Headquarters for Fine Finishes Since 1875

machine, easily handled by one man on scaffolds, etc. Could you give me the name or names of sources that would supply this machine?—*F. A. D.*

We know of one or two concerns that make portable electric and air hammers or chippers, and we are sending you their names and addresses in a letter. Will some reader please write us and name one or two such concerns?—*Editor.*

"Our employees are as honest as the day is long—but just look at all of that paint profit going home with them!"

Automatic Conveyor Dip

Referring to the article entitled, "Automatic Air Operated Dip Tanks Conveyorized", page 76, September, 1954, issue, we would appreciate receiving the name of the company interested in equipment listed in subject article.

We believe we were one of the first organizations to have employed air-draulically operated tanks in conjunction with intermittent operated trolley or cross-rod type of conveyors.

We number among several of our successful installations Oneida, Ltd., and Wright Aeronautical. The tanks were used for precise depth of immersion, period, and rate of withdrawal to remove any clinging tear drops.

Perhaps certain of our ideas might be of interest to "R. Co."—*Swenson Associates, Detroit.*

In a letter we are giving you the complete name and address of "R. Co."—and, by the way, the company happens to be in your state.—*Editor.*

We Have Paint Sludge Too

We note on page 82 of October, 1954, issue, you gave someone a list of firms interested in buying paint sludge. We have a quantity of paint sludge we want to dispose of, and will appreciate learning who will take it. —*L. Chair Co.*

. . . We are always in the market for this type of product; would be pleased if you will refer this company to us and also place us on your list for future requests.—*Orelite Products Corp., Gregg St., Lodi, N. J.*

In addition to the above, we have on file names and addresses of several concerns that are eager to make arrangements with paint users to reprocess their paint sludge.—*Editor.*

Engineered Spray Booths

Facts, pictures and tabulated data about both dry and water-wash spray booths, their design, operation, and various new accessories, are shown in a 2-color 8-page Bulletin No. 66, offered by Despatch Oven Co., 619 S. E. 8th St., Minneapolis, Minn., and 4554 North Broadway, Chicago, Ill. Paint Arrestor Filters are included with the several engineering features.

Announcing a proven

Cabinet Lacquer

(27% HIGH SOLIDS)

BARRETT'S Cabinet Lacquer is a 27% solids, cold spray, wood finish. It is recommended for use on furniture, TV and kitchen cabinets, shelf goods, toys and other wooden objects where an economical, full tough coating is desired.

BARRETT'S Cabinet Lacquer rubs and polishes nicely. Tests show that the film has excellent alcohol resistance. This Lacquer has been in production for some time and has been well received in the trade.

Solids: 27% **Color:** Pale Straw*

Alcohol Resistance: Excellent **Rub & Polish:** Machine or hand

Sheen: 25, 50, 75 and full gloss or made to your specification.

Cold Check Resistance: 15 cycles on 3-ply walnut and mahogany veneer.

**For light blonde finishes ask to see our water-white cabinet lacquer.*

TRY IT YOURSELF! You are invited to write on your company letterhead for prices and a free sample of this better cabinet lacquer, specifying Sheen desired. Data Sheet is also available.

Barrett Varnish Company

1532 S. 50th COURT CICERO 50, ILLINOIS

a complete line of dependable industrial finishes since 1870

Corrosion Spots Appear On Our Metal Caskets

We are producing a scratch brushed finish on copper and zinc caskets. Even though we use cleaners and are careful to not allow the humidity or air to come in contact with the metal, once it is scratch brushed, any longer than we have to, we still have corrosion spots that come through the final lacquer scratch brushed finish, after our product has been sprayed from 30 to 45 days. In other words, we get corrosion spots that bleed through our finish.

We have taken this up with the finishing houses we do business with, the copper company and the zinc company, the chemical houses, but none of them seem to have given us the answer to our problem. Apparently, we are dealing with the wrong company, because certainly there must be some way to "lick" this problem, inasmuch as there are a few competitors who are offering a product similar to ours, but they seem to be having no trouble.—*X Casket Co.*

First, it may be due to a surface contamination before plating. Secondly, it may be due to dirt particles in the top coat material. These particles may be very small—in fact hardly visible to the eye—yet they may act as a wick to draw moisture down to the metal and in this case it would cause a discolored spot.

I suggest that you select several samples of the metal, such as you use in caskets, and process these samples under ideal conditions, using extreme care in each operation, making sure that the surface is absolutely clean. Then dip the panels in the top coat material instead of spraying. If there is a laboratory available where these panels could be placed in a weatherometer or humidity cabinet to obtain the 30 to 45 day storage period in a matter of hours, this may give you a clue to the cause of your trouble.

In a letter I am giving you the name and address of a firm that makes two products, a corrosion preventive for copper, and a corrosion preventive for zinc. You might write these people for samples of each and experiment with test panels to see what results you get.—*A.*

It is difficult to attempt to solve, at long distance, a problem about which so few vital facts are known, especially after your suppliers have failed to effect a cure.

You mention a copper and zinc casket, but fail to state how these metals combined. You mention corrosion spots, but neglect to describe them, whether on copper, zinc, or seams, what color, etc. Likewise, some description of the sequence of operations, materials used, equipment, etc., are valuable in trying to determine the cause of troubles of this nature.

My first thought is that your trouble is due primarily to improper metal cleaning. During fabrication there is a lot of soldering done on metal caskets. I cannot stress too much the importance of neutralizing and cleaning every trace of soldering flux. This should be done immediately, to prevent any trace from being de-

UNITED CHROMIUM OFFERS...

for eye appeal...
for protection

Plastisols

that make unique sales-winning finishes

Unusual resistance to abrasion and chemicals... rich, satin lustre... chip-proof resiliency... thick or thin build-up on the product... and seam-free, pore-free corrosion protection... this whole, unique combination of properties is delivered by Unichrome Plastisol Coatings.

A pioneer in the field of vinyl plastisols, United Chromium has developed many compounds to suit special needs. Types now include practical sprayable Unichrome 5300 Series Coatings which deliver films up to 25 mils in a single, sag-free coat. Others apply by dip, knife, roller and slush coating methods.

Send for Bulletin VP-1 for more details.

UNICHROME **COATINGS FOR METALS**

...unique coatings to meet unusual requirements

UNITED CHROMIUM, INCORPORATED

100 East 42nd St., New York 17, N. Y.
Detroit 20, Mich. • Waterbury 20, Conn.
Chicago 4, Ill. • Los Angeles 13, Calif.
In Canada: United Chromium Limited, Toronto 1, Ont.

posited elsewhere by hands or brushes. If acid is used, the finishing room should be located where there can be no possibility of drawing acid fumes toward clean caskets. Zinc is especially susceptible to acid attack, in the air or otherwise.

Second, if any lubricant or soap is used for scratch-brushing or if any buffing compounds are used for polishing, all traces must be removed. This may entail more than one cleaning operation, as the material which will remove one may not necessarily be effective on the other. I take it for granted that you are willing to go to some added expense to correct your finish. This part of the problem could best be serviced by a company that specializes in cleaning compounds.

As for your finishing material, could it be that you are not getting complete coverage immediately after brushing and cleaning? Clear finishing materials are hard to judge for coverage, especially on such irregular contours as are found on caskets. Plenty of light and room, and a good spray height can help here. Or, your sprayer may be using a cup gun which he cannot maneuver effectively around casket handles and hardware. Once corrosion is started on a missed spot, it cannot be contained by subsequent coats. However, there are casket lacquers that have a limited ability to inhibit corrosion.

As you probably know, lacquers are fairly porous, especially clear lacquers, therefore it might be to your advantage to experiment with other materials. It should be fairly simple to set up an infrared tunnel that would enable you to use a baking material on your caskets. This would certainly afford more protection than lacquer.

It may be that your trouble has its origin in something which I have overlooked. If so, and if you care to furnish me with more detail about your finishing setup, I will certainly try to come up with something more. —*George Conrad.*

I have just talked by telephone to an expert on casket finishing and he declares that this trouble is probably caused by the cyanide in the plating solution—some traces of it—being imbedded in microscopic pinholes in the surface of the metal. You can probably check on this with a microscope or fairly powerful magnifying glass.

Suggested remedy: "Get rid of the pinholes first". I realize that this may be easier said than done; may even involve the changing of your source of supply for metal, or it may involve some extra treatment on the metal surface before it is plated; or perhaps some change or improvement in the plating.—*J.*

Research Products Corp. Names District Sales Manager

The appointment of Luther B. Sovde as District Sales Manager for New York State, excluding the New York City area, is announced by Research Products Corporation, Madison, Wisconsin, manufacturer of various types of air filters including the E. Z. Kleen washable air filter for forced air furnaces and air conditioners. Other products include industrial air filters, fiber replacement filters, and paint arrestor pads for paint overspray control.

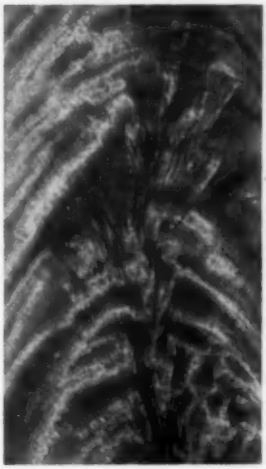
Mr. Sovde has a background of many years in merchandising, and advertising, and has spent the past year in the home office in Madison. He will make Rochester his headquarters for servicing the field.

Special Buff Catalog

Several new types of automatic buffs designed to meet special needs of buff users are featured in the new 12-page catalog now being distributed by American Buff Co., 2414 S. La Salle St., Chicago 16, Illinois.

Not Only
FAITHFUL REPRODUCTIONS
but
NEW AND UNIQUE FINISHES
by

OXVAR *Processes*



- **Direct Application**
- **No Transfer Film**
- **No Silk Screen**
- **Lowest Cost—Highest Quality**
- **Manual or Automatic Machines**

Over 30 years' experience in supplying these products and services

1. Copper Tubing for Cylinders
2. Copper Cylinders with Heads and Shafts
3. Copper Plates
4. Etched Copper Plates
5. Etched Copper Cylinders
6. Graining Pastes and Inks
7. Finishing Materials
8. Manual Graining Equipment
9. Semi Automatic Graining Machines
10. Fully Automatic Graining Machines
11. Roll Washers
12. Scrapers
13. Composition Printing Rolls
14. Photographic Service
15. Visual Color and Product Design Service
16. Etching Service

ONE SOURCE • ONE RESPONSIBILITY

Write Us Or Call On Us Now

OXFORD CORPORATION

350 MORRIS STREET
TOLEDO, OHIO

522 SPRINGFIELD STREET
DAYTON, OHIO

Time Standards For Spray Painting

We are interested in information pertinent to the time standards for the organic finishing of metal parts and products by spraying methods. Any information you may have on this subject will be appreciated.

Your recommendation of handbooks or other literature, which may be available on organic finishing and time standards, would be very helpful.—*XYZ.*

We do not have any data relating to time standards for the organic finishing of metal by spray methods. This would be dependent upon a number of factors such as size and shape of articles, method of handling, coating applied, technique of operator, etc.

We are sending you several pieces of printed matter which show the effect on the speed of operation, the amount of material consumed and the quality of finish resulting.

Each plant must have a study made of its operations. Are the variables under control? For example, room temperature, material temperature, viscosity of material, hose diameters, fluid and air pressures and spraying technique? These elements must all be controlled before a time standard can be attempted.

Still another and important control is that of the spray gun motion—the proper approach to the painting of an article and the number of passes required to complete it.

Heavy material at one time and light material at another will change the time required, the results obtained, and the material consumed.

Hose diameters will affect spray painting results. Too small an I.D. [inside diameter] on air hose will cause excessive pressure drop. While the pressure gauge at the transformer shows say 60-lbs., the pressure at the spray gun air inlet may be 10 or 15 and even 20-lbs. lower. If fluid pressure is constant, then the viscosity or consistency of the material must be constant.

There is a correct approach to the painting of every object. A preliminary study will enable the supervisor to determine this approach, to accomplish the coating in the simplest way, with the least number of strokes and with the least expenditure of energy. It is surprising how much arm waving can be eliminated and thus make the operator's job easier by conserving his energy, thus keeping him fresh for an 8-hour production run.

I hope these suggestions will be helpful and that you will be able to uncover and correct operations in your production to enable you to get at figures for standards—not as they are, but as they should be.—*E. F. Frey, The DeVilbiss Co.*

I have been asked on numerous occasions, "What are the recognized Finishing Standards?" The trouble is, in answering this question, there are more standards than there are men to use those standards. Each manufacturing plant sets its own; some are good; others do not make sense.

Men working in a plant that has its own finishing standards do their best to follow instructions. Every good man with an ounce of ambition is naturally trying to improve his own position. Some of these men will accept jobs paying more money in other plants. The standards used on their last job are carried over to the new job and are intermingled with the standards there, and before long no one knows how to obtain the results required.

If you ask the sprayer, foreman, inspector or plant engineer why they are doing a job a certain way, the answer will be, "That's what the

SANCO #1005

THE NEW CHALLENGE

TO ESTABLISHED SPRAY-DIP COATING METHODS

NOW — A COMPLETELY NEW HOMOGENIZED DIPPING PAINT DEVELOPED BY THE MONROE SANDER CORPORATION's RESEARCH STAFF —

ASSURES PERFECT, NON-FLOATING COLOR CONTROL.

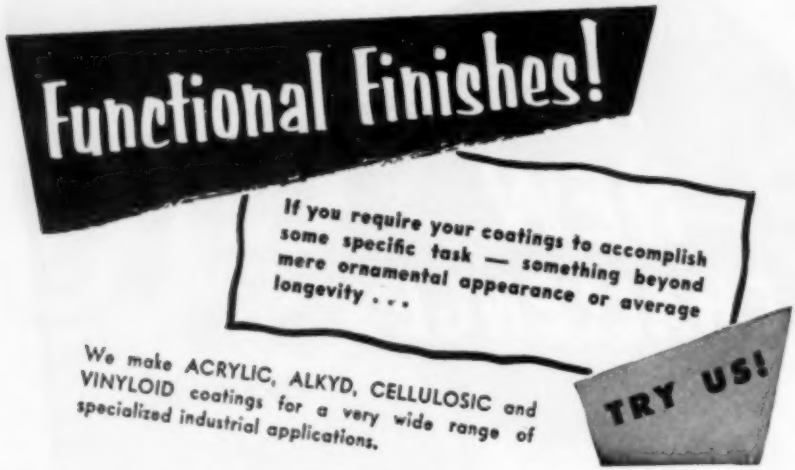
in many cases —
REPLACES and CUTS COSTS of previous SPRAYING PROCESSES!
EFFECTIVELY USED RIGHT NOW IN FINISHES OF —
Metal Furniture
Louvered Locker Doors
Electrical Switch Gear
Filing Cabinets

with these outstanding benefits —
NO COLOR FLOAT
NO SETTLING IN TANK
NO VOIDS

For more information on how you too can now get by far the BEST DIPPING RESULTS ever achieved at GREAT SAVINGS to your organization — Contact The Monroe Sander Corporation NOW—Let our specialist show you how it is done at no obligation to you at all.

The MONROE SANDER Corp.
10-18 Forty-Sixth Ave.
Long Island City
New York

Manufacturers of Industrial Paint & Enamel Finishes;
Specialists in Product-Finishing


Functional Finishes!
If you require your coatings to accomplish some specific task — something beyond mere ornamental appearance or average longevity . . .
We make ACRYLIC, ALKYD, CELLULOSIC and VINYLOID coatings for a very wide range of specialized industrial applications.
TRY US!

• THE VARNISH PRODUCTS COMPANY
5206 Harvard Avenue, Cleveland, Ohio

Specs call for." But if we could only stop and analyze those specifications! The answer might materialize into a conglomeration of advice from people with no production experience, in notes and in letter form, reshuffled and the high points picked out and printed; and those are the specifications we are supposed to follow.

Maybe I am being rough in my statements, but sit down for a few minutes and analyze your own product. Do you understand the limitations of the spray-guns, the finishing materials your men are using?

"No," you may say, "I have other work to attend to; that's the reason I hired an efficiency expert, and he is a good man; he has worked in eight different manufacturing plants."

There again, you are not analyzing the situation. How old is this expert? A young man with young ideas, probably in his early thirties? He has had eight jobs since he left college, and is only in his thirties? Does that mean he is a good talker, but can't hold a job long? And that's the type of man you have put your faith in?

The finish on your product is the selling medium. A cheap finish means a cheap product.

When you bought your new automobile, did you check the gauge of steel in the body and fenders? Did you examine the frame to be sure the body would not collapse if you skidded on an icy or muddy shoulder and rolled over?

No. You looked at the beauty of the car; you admired its modernistic lines and the finish. You had faith in the manufacturer.

The paint job—if it had varied in color or had been covered with orange peel, blisters, etc., you wouldn't have wanted it.

The finish is just as important on your product and you should take the time to learn something about the finish on your products.

I can offer you finishing standards,

but will the equipment and finishing materials you are using permit you to follow those standards?

If your sprayers are not giving you one square foot of sprayed surface per second, check the following items. Maybe it is a lack of understanding on the part of the sprayer or the foreman or management.

The Spray Gun. Snap the trigger of the gun, with the nozzle held 8-in. from a test panel. It should show a perfect fan pattern; if not, you have a defective nozzle. Excessive material and air pressure can result in 75% to 80% waste due to rebound from the surface of the work. Are you throwing away 80% of the paint you are buying?

Does the spray gun fit the operator's hand and is it reasonably light in weight? An uncomfortable gun can begin to feel very heavy and tiresome in the sprayer's hand after two or three hours of continuous spraying.

Does your sprayer cross coat? If he does, he is working twice as hard as is necessary; he is slowing down production, turning out an uneven paint job, and wasting paint.

Does your sprayer use a piece of wire to clean the air jets of his air cap? If so, fire him. He will damage the air cap; the air stream will get out of balance and he cannot obtain a good finish. That spray gun is a precision piece of equipment and it costs money.

A complete article about the care and operation of spray guns would fill this magazine, so let me ask a few questions regarding the equipment surrounding your spray application.

Is the compressor clean or is it pumping dirt or oil? Are you feeding clean air to the spray booth? Not to the whole spray room where several others are working to create dust, but to the spray booth only?

Was the spray booth designed for your plant and to operate in the po-

AGATEEN

Can You Top This!
"MILEAGE PLUS"
With 30X Clear Bake

The country's foremost flash-light manufacturer* reports finishing over 55,000 2-battery flash-lights with less than 15 gallons net of mixed AGATEEN 30 X Clear Baking Lacquer. We repeat "Can You Top This?"

* Name on request.

Minimum orders accepted.

Agate Lacquer Mfg. Co., Inc.
Serving Industry Since 1927
11-13 43rd Road
Long Island City, N. Y.
Stillwell 4-0660-1

AGATEEN
THE LAST WORD IN QUALITY

NEW PAINT STRIPING IDEA . . . *Works Faster, Easier, Better!*

MASTER PAINTERS' STRIPING TOOL
Easy to Use as a Fountain Pen

Men in every branch of industry now rely on Master Painters' Paint Striping Tools to aid in turning out cleaner work in a fraction of the time and with a fraction of the effort.

This amazing tool paints straight or curved lines with equal facility. No smears or smudges. Uses any kind of paint, enamel or lacquer. Newest model paints DOUBLE parallel lines . . . wide or narrow or both —*with one operation*. Does a big job in large or small shops.

Write for PICTURE FOLDER with prices and descriptions — all sent FREE.

USE FOR STRIPING

• Furniture • Wallboard
• Toys • Bicycles • Signs
• Scoreboards • Ceramics
• Lampshades • Autos

— anything and everything that requires clean, accurate striping with paint, enamel or lacquer.

FREE ENGINEERING SERVICE
If you have any paint striping problem, our staff of experts will be glad to cooperate with you. No cost or obligation.

WENDELL MFG. CO. 4234 N. LINCOLN AVENUE Dept. 911 CHICAGO 18, ILL.

Conscientious Craftsmanship on

SILK SCREENS

The new and exclusive process used to make the ATLAS SCREEN insures long life and guarantees complete satisfaction.

A full line of silk screen supplies and equipment. *(Write for Free catalog—No. 134.)*

Use our free industrial consulting service.

ATLAS
SILK SCREEN SUPPLY CO.
CAnal 6-4234 865 Milwaukee Ave.
CHICAGO 22, ILL.

YOU
Can rely on
RANDOLPH

FOR PROMPT SHIPMENT IN ANY QUANTITY OF

PERFORMANCE PROVED
GOVERNMENT SPECIFICATION
FINISHES

•

Lacquers • Enamels • Dopes • Thinners
Clear Metal Finishes • Colored Lacquers
Clear S.G. for Metal • Texture Enamels
Specialized Production Finishes
Aircraft Finishes

•

RANDOLPH
PRODUCTS CO.
CARLSTADT, NEW JERSEY

sition in which you now have it installed?

Is the spray booth exhaust drawing fumes across the sprayed article from a degreaser?

Does the oven have an exhaust at the top or bottom? If at the top, you probably have areas of dead air and solvent fumes.

If your product requires a 30-minute bake, does it remain in the oven for at least 45 minutes? If not, your finish is not cured.

Are you following your paint supplier's recommendations for reducing your paints? If so, are you using his solvents or those he recommends? If not, you cannot rightfully turn to him if the finish does not meet your expectations. The use of improper or unsuited solvent can cause headaches.

Do you spray an article at room temperature when the humidity is high? If you do you are spraying over a damp surface which interfers with adhesion.

Are your solvents at room temperature when you reduce the paint to its correct viscosity? If not, your solvent will often become a diluent, resulting in an orange peel finish.

To set standards we must understand our own product, and when asking advice, we must not expect the equipment manufacturer to offer advice on the type of paint to use; or the paint manufacturer to advise us on the make or kind of spray equipment to use. Each manufacturer is selling his own product, and his representatives are seldom in position to offer accurate advice regarding someone else's products.

The paint salesman is not a paint chemist—not as a rule—nor is he a production engineer. And the spray equipment salesman is not an efficiency expert. They will try and help you, but if you do not stop and become familiar with all of the production problems yourself, you can-

Direct Pressure Can & Small Drum Filler

This machine is recommended for filling heavy liquids into container capacities from 1-pint to 5, 10 and 15-gallon drums whose gross weight is not in excess of 250-lbs.

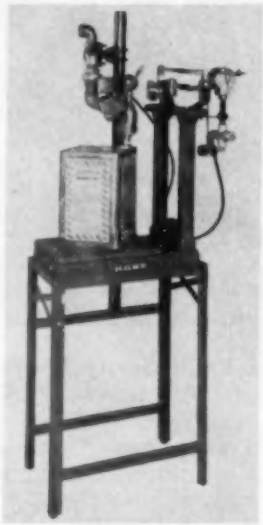
Scale beams at operator's eye level. Weights can be easily checked or changed. Upper beam graduated 15-lbs. by 1-oz. Lower beam 50-lbs. by ½-lbs., making it possible to tare any container before filling and check the results after. Special sealed counterpoise weights for net container contents if desired.

Scale platform measures 12-in. by 15-in., and can be supplied with roller conveyor at slight extra cost.

Filling valve is both vertically and horizontally adjustable, and will rotate across scale platform to center nozzle over round, square, or rectangular container openings. Interchangeable nozzles are available to fit all orifices from ¼-in. to 1½-in.

When writing for further information, please specify: Capacity and gross weight of containers to be filled, as well as liquid being used; Flat or roller platform; Voltage, phase and cycle of electric current in use; Bronze or cast iron valves.

THE VOL-U-METER CO.
P. O. Box 54, Buffalo 16, N. Y.



not possibly set up standards or take the standards of others and apply them to your product and plant conditions.

Just because some manufacturer has a number of very large plants throughout the country doesn't always mean that you can profitably follow his footsteps. I know of several very large companies who, for instance, use an oxidizing type of primer and spray a lacquer finish coat over this primer; then they blame the spray gun because they have trouble with poor adhesion.

If the big fellow sets up standards in this manner, trying to use materials that are not compatible, how can we expect to set up certain rules to be followed by all of the finishing field?

May I suggest a new outlook on your finishing line? Reason this way: My men are doing a good job now. What can I do to continuously improve my finish?

As you investigate for yourself and pass the newly discovered information on to your sprayers, you are automatically setting up standards that cannot be beat.—*William Beacham, Finishing Consultant.*

Anyone responsible for spray painting or finishing results can obtain valued information from the leading manufacturers of spray equipment—from their free Schools on Spray Painting and their Customer Research facilities.—*Editor.*

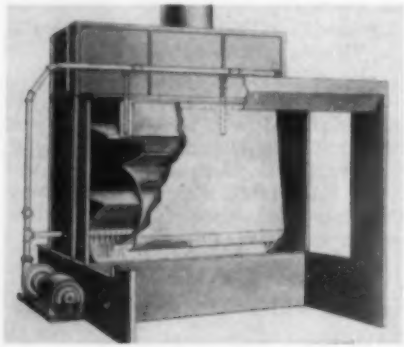
H. H. Miller Elected President

The board of directors of I-Sis Chemicals, Inc., of Springdale, Conn., announces the election of Harry H. Miller as president of the company. Mr. Miller has been associated with the company since it was founded, and more recently was vice-president and general manager.

New Paint Spray Booth Cleans Exhaust Air in W. W. Chamber

A new type water spray paint booth that is claimed to be practically 100% efficient in removing paint particles from the exhaust air is announced by Despatch Oven Co., 619 Eighth St. S.E., Minneapolis 14, Minn.

Using an entirely new type baffle chamber, the "Cleanaire Water Wash Paint Spray Booth" provides a positive air cleaning action that prevents paint pigments and volatiles from reaching the exhaust stack or the outside of a building.



Cut-a-way view of paint spray booth shows new water wash scrubbing chamber with the special baffles and spray header for removing paint from the air.

The new air scrubbing chamber features a specially-designed spray header mounted within two curved baffle plates. When water is pumped into the header it sprays forth in three directions from three rows or orifices and strikes the baffle plates, building up a violent spray turbulence that removes practically every particle of paint.

Uniform gravity flow of the booth's water curtain is achieved by a new supply tank that is easily adjustable to the proper level. The tank supply header is located outside the exhaust plenum chamber for easy access. Two vertical feeder lines, which empty near the bottom of the tank, do not interfere with tank adjustments.

Because of the booth's new design, less horsepower is required to draw the required volume of air through the booth and out the exhaust stack.

Construction is panel type of 18-gauge steel with formed channel edges for extra strength. Interior is easily accessible in three minutes without tools by four quick-opening clamps. The efficiency of the air and water cleaning action throughout the booth eliminates daily cleaning maintenance. The company will be glad to supply additional information on request.

Aluminum-Base Calking Seal

An aluminum base calking compound, Alumilastic, said to retain its elastic qualities a long time is offered to seal the faying surfaces of lapped, butted or bedded joints.

It may be used as a moisture-tight seal for metal to metal and wood to metal joints. The metallic pigment provides a bright aluminum color and forms a tough metallic armor, protecting the inner oils from oxidation.

The metallic compound may also be used for glazing all types of steel, aluminum and wood sash, and does

THE MOST AMAZING FINISH DEVELOPMENT IN 100 YEARS!

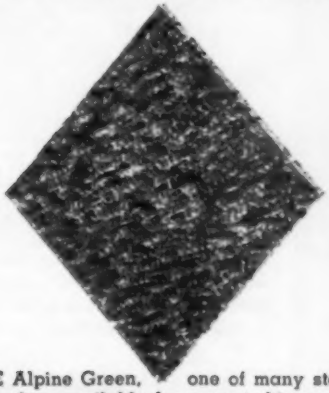
COLOR-FLECKED

M. [illegible] CO.

PLEXTONE®

SINCE [illegible] 1876 (Mfd. under U. S. Pat. No. 2591904)

Imagine—a textured and MULTI-COLORED finish—sprayed at ONE time, from ONE gun, in ONE coat that covers surface flaws and blemishes completely!



PLEXTONE Alpine Green, [illegible] one of many standard pre-mixed colors available for prompt shipment. Also available in solid colors and in custom multicolors.

CAPSULE FACTS

COLOR-FLECKED PLEXTONE is a new industrial finish in which colors exist separately until sprayed, when they interlace as shown above.

CHARACTERISTICS

Lacquer base • Air dries approx. 30 minutes — dries hard 2 to 3 hours • Available in flat or semi-gloss • Good chemical resistance • Exceptional hiding power • Does not stain • Resists wear, chipping, cracking • Can be scrubbed, even scoured • Can be touched up without showing • Thicker film hides surface imperfections, covers porous materials • Available in non-toxic grades • Bonds readily to wood, wallboard, paper, cement, plaster, phenolic impregnated papier-mache forms, plastics, woven fabrics, and metals such as cast iron, steel, aluminum, brass, copper.

PLEXTONE—CUTS FINISHING COSTS UP TO 35%

Eliminates much costly pre-finishing, hides surface flaws. Usually only one prime, one PLEXTONE coat required!

PLEXTONE — UNBELIEVABLY RUGGED!

Color flecks go "thru-the-film," resist abuse, defy alcohol, grease, oil. Can be washed, scoured, without damage!

PLEXTONE — SALES APPEAL OF *MULTICOLOR!*

Endless new effects of 2, 3 or more colors sprayed from one gun, at one time . . . tone-on-tone, spatter-dash, etc., etc.

PROVE IT TO YOURSELF—MAIL COUPON TODAY

MAAS & WALDSTEIN CO.

2110 McCARTER HIGHWAY, NEWARK 4, N. J.

Midwest Division: 1658 Carroll Ave., Chicago 12, Ill.

Pacific Coast Division: Smith-Davis Company, 10751 Venice Blvd., Los Angeles 34, Cal.

PIONEERS IN PROTECTION

PLEXTONE®

MAAS AND WALDSTEIN CO., PLEXTONE Division
2110 McCarter Highway, Newark 4, New Jersey

Gentlemen: Please send me FREE color chips, PLEXTONE sample, and application data.
I am particularly interested in PLEXTONE for finishing _____

Name _____ Title _____

Company _____

Address _____

City _____ Zone _____ State _____

THINNER
by the drum

THINNER
by the carload

THINNER
by the tank

TAILORED TO YOUR NEEDS
SEA-LAC
DURALAC CHEMICAL CORP.
84 LISTER AVENUE, NEWARK 5, N. J.

not require painting. It will withstand a wide temperature range without deteriorating, and is available in seven consistencies for pressure and hand gun calking, knife and gun glazing, and for coating by brush or spray.

Further information and samples may be obtained by writing The Parr Paint & Color Co., 18363 Syracuse Ave., Cleveland 10, Ohio.

Oscillating Gun Pressure Spray Decorating Machine

A new oscillating gun pressure contact spray decorating machine constitutes the first means which permits the gun to operate in a concave arc, or pendulum type swing, to effectively coat the outside of convex areas.

The machine, designed by Conforming Matrix Corp., is for painting areas up to 3x6-in. The gun oscillates continuously to paint either a concave surface, such as the inside of a horn button, or a convex surface, such as the outside of a doll's face.

The arc described by the gun can

Spray decorating machine is clean and safe.

NON-INJURIOUS ELECTRO NON-INFLAMMABLE

COLD STRIPPER

FASTEST *in Action* LOWEST *in Price*

WRITE FOR TESTING SAMPLE OR ORDER
5-GALLONS AT DRUM PRICE

Specify whether dip or brush type is desired

Allied Finishing Specialties Co.

2641 W. Grand Ave. • Chicago 12, Illinois

be adjusted to suit the nature and size of the part. The machine may also be operated with the gun in a stationary position. Placing the part into the mask and depressing the table top about ¼-in., starts the paint operation.

The mask measures 8x4-in., and since the machine is portable and occupies a floor space of only 34x30-in., and is 36-in. high, a battery of them, each painting a different part, requires very little space, and exhaust system may be used in tandem.

The machine is self-contained, completely enclosed, and has a built-in plenum chamber. Working parts are completely covered and cannot become contaminated by overspray. There is built-in air exhaust outlet 8-in. in diameter which is sufficient to handle 900-cu.ft. per minute. Air is drawn across and under the top of the machine from the front, and exhausted from the rear. An agitation type mask-washing device can be incorporated. Under the spray gun, there is a sludge tray for removing any overspray that settles to the bottom. There is no exposed operating mechanism inside the paint chamber. Pipe fittings for air and paint lines are on the back panel.

A free brochure on the machine will be sent to anyone addressing his request to Conforming Matrix Corp., 331-3 Todelo Factories Bldg., Toledo 2, Ohio.

TOMORROW'S Products Tested TODAY

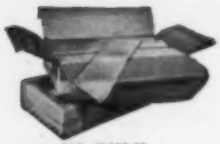
A service to aid industry in producing longer-lasting and better-looking products. Quick predetermination of durability and permanency by actual exposure test in South Florida. Write us today for full information.

SOUTH FLORIDA TEST SERVICE
EST. 1931
4201 N. W. 7th St. Miami 34, Fla.

For Dust Free Finishes!

BOND TACK CLOTH

IN ROLLS
Cut off any size piece to use as needed.



IN BULK
Cut and folded. Ready to use.

STAYS SOFT AND TACKY
A SPECK-FREE FINISH EVERYTIME

Now Available in Rolls or Cut Bulk—White or Gold. In Three Different Types of Cloth

Get your Tack Cloth packed just the way it's easiest for you to use . . . either in 150 yard rolls of 36" wide cloth or in handy cartons . . . 100 or more Tack Cloths to the carton.

No matter which way you buy it, you can be sure that every square inch will stay SOFT and TACKY until the very last bit is used up!

The Cut Bulk size is 18" x 36" . . . folded to 4½" x 18" for ease of handling. ALL BOND TACK CLOTH is **Spontaneous Combustion Proof, Lint-Free and Wax Free.** Gives a sparkling speck-free Finish **every time.** Clean and sanitary. No waste.

TRY THEM and COMPARE RESULTS.
Samples Gladly Sent Upon Request.

BOND CHEMICAL PRODUCTS CO.
"The Tacky Wiper Specialists"
2641 N. CLYBOURN AVE. CHICAGO 14, ILLINOIS

Also Individually Packed in Glassine Envelopes—144 to the Carton

A Warranty of Satisfaction in Every Carton

Sharpe's New Spray Gun

A new and economical multi-purpose spray gun is announced by Sharpe Mfg. Co., 1224 Wall St., Los Angeles 15, Calif. The company describes the new air valve-type gun, Model 25, as being of high performance; versatile and ruggedly built. It is a combination spray gun with quart cup attachment.

Like other models in the recently redesigned Sharpe gun line, Model 25 features interchangeable air nozzles having self-centering tapered seats, and fluid tips and needles. With the siphon-pressure valve set for pressure feed, the gun gives a fast spray for large work or heavy paint; with the valve set for siphon feed, the gun provides easy controllable spray for fine work.

Catalog sheet G6 explains all features of this new spray gun. Send for a copy.

New Water White Lacquer

A new water white lacquer known as NCP No. 51 has been developed. By actual sunlight exposure tests this lacquer has shown exceptional color retention properties.

In repeated laboratory tests it has shown that where the original color was retained, quality of the product was assured.

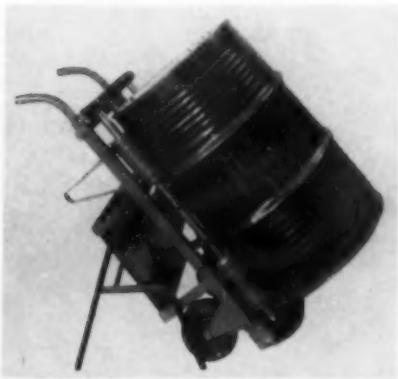
Those interested may write the National Chemical & Plastics Co., 1422 Philpot St., Baltimore 31, Md.

27%-Solids Cabinet Lacquer

A 27%-solids cold-spray lacquer for fine furniture, cabinet work and other wood products is offered by Barrett Varnish Co., 1532 S. 50th Court, Cicero 50, Ill. It produces a full-body, tough and durable coating that can be rubbed and polished effectively by machine or by hand after an overnight dry. The finish produced with this clear lacquer has excellent resistance to alcohol and cold checking (15 cycles). Regular sheens available: 25, 50, 75 and full gloss. Colors: pale straw for medium and dark finishes; water white for blond finishes. Send for free descriptive circular.

Portable Drum Cleaner

A light weight portable machine designed and built for cleaning drum interiors as well as for rolling loaded drums to mix the contents, is offered by The Vol-U-Meter Co., P.O. Box 54, Buffalo 16, N. Y. It loads and unloads as easily as a warehouse truck. The center of gravity is low enough to prevent excessive vibration and to make loading and unloading of drums entirely safe, even when filled. [*To 104*]



For cleaning drum interior or for "mixing"

FLOW COATING BOOK

Mr. Zahn, the author of "Flow Coating", says that any product which can be dipped or sprayed can be finished by the flow-coat method. His new book contains 296 pages 5¼x7¾-in.; 13 chapters.

The great range in new kinds of solvents now available, plus phenolic-base resin paints and vinyl type paints which have been so successful in the flow-coating method of application, presents endless possibilities for profit. The industrial user can now afford to pay a little more for better materials and profit by a higher quality product.

"Flow Coating" explains the various industrial painting methods such as: dipping, spraying, electrostatic, steam, roller coating, centrifugal, hand spraying, automatic dip and many others. Direct comparisons between flow coating and these methods are dealt with in detail.

Mr. E. A. Zahn has spent 25 years in research on industrial paints and application methods. He is the inventor of the Zahn Viscosity Cup, and has acted as consultant to many manufacturing concerns. In 1938 he received the Charles A. Coffin award for contributions made to the electrical industry. Mr. Zahn has been associated with General Electric for 25 years and is at present Organic Finishing Engineer at General Electric's Appliance Park, Louisville, Ky.

Price $6.50—Money Back Guarantee

INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

BOOKS On Finishing Available

"MODERN ORGANIC FINISHES—Their Application to Industrial Products" (452 pages) new $8.50

"Flow Coating," (296 pages) new 6.50

"CHEMICAL FORMULARY" (Vol. IX) 7.50
(Preceding Volumes also available, same price)

"FINISHING METAL PRODUCTS"—2nd edition (352 pages) 6.00

"PRACTICAL FURNITURE FINISHING" (112 pages) 1.75

"FURNITURE FINISHING (543 pages) 5.00

"SPRAY PAINTING"—Industrial and Commercial (169 pages) 2.50

"COLOR DECORATION AND DESIGN" (200 pages) 3.00

"THE MIXING OF COLORS AND PAINTS" (292 pages) 3.00

"WOOD FINISHING" (361 pages) 3.00

"NATIONAL PAINT DICTIONARY" (704 pages) 10.00

"MODERN POLISHES AND SPECIALTIES" (313 pages) 7.50

"GRAINING"—Ancient and modern (224 pages) 5.00

"THE SILK SCREEN PRINTING PROCESS" (225 pages) 5.00

"SCREEN PROCESS METHODS OF REPRODUCTION" (252 pages) 4.00

"THE SCIENCE OF WRINKLE FINISHING" (204 pages) 5.00

"THE SCIENCE OF MODERN WOOD FINISHING" (386 pages) 7.50

"PAINT & VARNISH TECHNOLOGY" (509 pages) 8.00

"METALLIC AND NON-METALLIC COATINGS FOR GRAY IRON" (76 pages) 1.75

"PAINT FILM DEFECTS — Their Causes and Cure" (544 pages) 12.00

"INDUSTRIAL SOLVENTS" (764 pages) 12.00

"FINISHING MATERIALS AND METHODS" (320 pages) 4.00

Cash Must Accompany Order—
Send for Descriptive Circular

INDUSTRIAL FINISHING
1142 N. Meridian St. Indianapolis 4, Ind.

The frame is welded together to form a rigid unit sufficiently stable for heavy work, yet light enough to be conveniently portable.

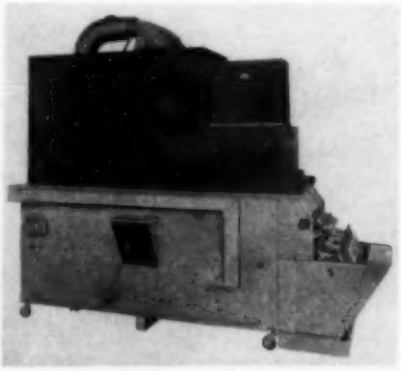
As a roller, this machine can be used for mixing the contents of loaded drums up to 250-lbs. gross weight. With a larger motor heavier loads can be rolled.

For cleaning the curved sides of drums, the machine is lowered to let the drum rest in horizontal position. For end cleaning (or for mixing contents) a removable all-metal horse is used to support the machine in elevated position, with the drum tilted upward as shown in the accompanying illustration.

Flock Machine Coats Greeting Cards

Adhesive applying and flock coating machines are now available. They come in 16-in. and 24-in. widths. The machine will process one or two lines of greeting cards. Flock is applied electrostatically. A drop-off and exhaust system cleans off excess flock from the cards.

Speeds up to 5000 cards per hour, single line, and 10,000 double line, are possible.



Machine applies flock to greeting cards.

THINNERS

LOW COST!

- ASK FOR QUOTATIONS
- FORMULATED TO MEET ANY SPECIFICATION
- QUALITY AND UNIFORMITY GUARANTEED

Specialists in Thinners for

- Leather
- Metal Etching
- Polystyrene Plastics

Shipped in Tank Cars, Tank Wagons, Drums or 5 gal. Cans

Synthetic Reducers and Retarders

Write or phone for technical information. Prompt service and deliveries.

ELL-BEE CHEMICAL COMPANY, INC.

Hanover, N. J. Phone WHippany 8-0194 WHippany 8-1277

WATER WHITE LACQUERS & SEALERS HIGH SOLIDS AND NON-YELLOWING

for: — **MODERN FURNITURE**

and all light shades

- LOW COST
- COLD SPRAY
- VARIOUS SHEENS
- EXCELLENT BUILD
- MAR RESISTANT

A companion machine for applying glitter to cards is also offered. With the same production capacity as the flocking unit, this machine will apply various types of material, from "diamond dust" to "sequins."

For complete details on these machines, write Darling-Payne Corp., 82 Beekman St., New York 38, N. Y.

Hand Cream Protects Workers

Kerodex, a medically tested hand cream that provides maximum protection against many skin hazards is now offered by Ayerst Laboratories, Inc., 22 E. 40th St., New York 16, N. Y.

The cream protects against contact dermatitis due to primary irritants, as well as against sensitizing agents encountered on the job. Common irritants include acids, alkalis, solvents, oil, tar and pitch. Among sensitizing agents, nickel, rubber and chromates are well known offenders.

In addition to protecting the skin against initial contact, this cream is also useful in preventing recurrence of a dermatitis. The cream provides a protective coating which is invisible yet strong, and as elastic as the skin itself. It protects for as long as three to four hours. Tests have proced that the cream will not affect the materials handled, nor is it affected by them.

Since most irritants are water soluble or water insoluble, two types of cream have been formulated. Kerodex No. 71 gives protection against wet work. Kerodex No. 51 and 55 gives protection against dry work.

Other creams available are No. 58 for protection against light rays; this one also offers protection against the photo-sensitizing action of tar, pitch and asphalt fumes.

Full Vision Respirator

A new chemical cartridge respirator with an all-vision facepiece is described in a bulletin published by Mine Safety Appliance Co.

Offering new safety with comfort and convenience, the MSA All-Vision Chemical Cartridge Respirator is designed for maximum vision and freedom of movement while giving complete protection to men working in areas contaminated by light concentrations of organic vapors, acid gasses, ammonia, dusts, mists, fumes and smoke. It is for use in atmospheres which would ordinarily be uncomfortable or would have a toxic effect after long or repeated exposure.

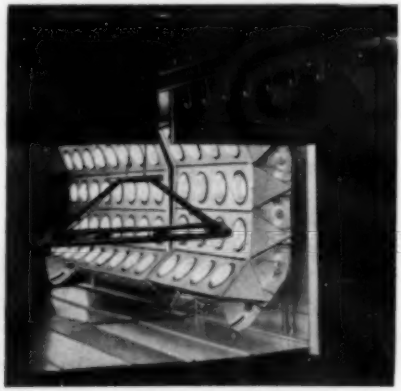
Copies of bulletin No. 1007-5 may be obtained from Mine Safety Appliance Co., 201 N. Braddock Ave., Pittsburgh 8, Penna.

New 60-page 1954 catalog on
Paint Testing Instruments
is now available
A copy will be sent on request.
GARDNER LABORATORY, INC.
Bethesda 14, Md.

CRS
METAL FINISHING CONSULTANT
With a well-known record of achievement. Let me help you.
Since 1928
C. Raymond Syer
Beverly Hills, California

Infrared Conversion Units

Patent-Flex Mfg. Co., Cloverport, Ky., announces an addition to its line of basic units for easily converting any manufacturer's present paint baking facilities to infrared drying. These units are supplied in standard lengths of 24-in., 32-in., and 48-in. They have special mounting brackets for easy installation.



For forming infrared paint-baking tunnels.

Any number of lamp rows can be used to give the required height of lamp bank. Each lamp row is adjustably mounted, so that the entire bank of lamps can be used as a flat bank, or curved to any shape, so that the lamp row arrangement will be suited to the individual job.

These conversion unit banks provide a quick and easy method to speed up paint drying requirements. Units are supplied factory wired, or unwired, and with high efficiency hermetically sealed reflector heat lamps.

New Screen Process President

Milton Grant, Silk Screen Process, Inc., Cleveland, was elected president of the Screen Process Printing Association, International, at the group's sixth annual convention in St. Louis, Oct. 30-Nov. 2.

SPECIFY THE FINISH
WITH *ALL THE EXTRAS* . . .
SPECIFY NEW PERIOD

- Fillers and Stains
- Lacquers—Clear and Semi-Gloss
- Sealers
- Lacquer Enamels—Flat and Gloss
- Synthetic Enamels

Ever wonder why you see so many products with finishes by New Period? Here's the answer: New Period Production Finishes are better-looking . . . longer-lasting . . . easier to apply. Yes —for all the extras . . . specify New Period.

Quality Isn't Just Luck

Write for 5 Gallon Working Sample at Drum Price

MANUFACTURERS OF FINE WOOD AND METAL PRODUCTION FINISHES

Established 1917

NEW PERIOD Production Finishes

NEW YORK WOODFINISHERS' SUPPLY CO., INC.

109 Imlay Street Brooklyn, N. Y.

Floats Paint and Lacquers in Water Wash Paint Booths

Presto-Mat, a completely new liquid chemical for water-wash paint spray booths, is announced by the manufacturer, Chamberlain-Haber Chemical Co., 1105 W. 11th St., Cleveland 13, Ohio.

According to the manufacturer, Presto-Mat is effective because its liquid form means no premixing, perfect solubility, and no sediment or clogging. The manufacturer further states that since it is compounded double strength, it more economical to buy, use, store and ship.

Presto-Mat is added to the water in the tank reservoir where it combines with the paint sludge to form a floating mat. This mat is easily skimmed from the surface of the tank reservoir so that the spray booth curtain, nozzles and all metal parts are always kept free and clean. Presto-Mat makes possible a full and heavy water curtain, maximum air velocity, maximum paint reclamation and a minimum of spray booth maintenance.

Small Laboratory Stirrer

A completely new "Power-Stir" is presented by Eberbach. This 1/10-hp. laboratory stirrer now includes the "Hollow Spindle" and a quiet worm-gear reduction drive. The hollow spindle enables users to vary the working length of the stirring rod.

Variable speed and high torque are features of "Power Stir" which operates at 100 to 1000-rpm. An angular support rod permits stirring at angles up to 22°. Complete information is available in Bulletin 270, Eberbach Corp., Ann Arbor, Mich.

This last edition is an excellent text and reference book of 758 pages, containing a tremendous amount of authentic and complete information on industrial solvents and their uses—for example, in cleaning and finishing materials and wherever solvents are used in industry. The revised contents are organized and classified in easy-to-read, easy-to-find form for practical busy men.

Its practical contents are divided into 16 chapters, some of which include such headings and sub-headings as solvents, non-solvents, evaporation rate, boiling point, flash point, toxicity, viscosity, safe handling, hydro-carbon solvents, alcohols, ketones, acids, ethers, esters, etc. It contains many new charts, illustrations and conveniently tabulated material, all developed to help the reader grasp the factual information quickly. The alphabetical subject index covers 11½ pages.

This book will prove valuable to key men in the industrial field, who have responsibilities in connection with the cleaning, surface conditioning or preparation of products for painting, plating or polishing, and those concerned with the selection, purchase, storage, handling, testing or use of finishing materials and thinners for same.

Price $12.00—Money Back Guarantee.

INDUSTRIAL FINISHING

1142 N. Meridian St. Indianapolis 4, Ind.

New "Cold Cleaners" Offered

To replace highly volatile solvent cleaners in still tanks on the production line, a new combination "cold" cleaner is offered by E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Penna. Plant safety is increased by eliminating this fire hazard.

Other merits claimed for this room temperature, water-emulsion cleaning combination of Houghto-Clean 402-403 are: thorough removal of most shop soil; protection of freshly cleaned surfaces from rusting between operations or in temporary indoor storage; elimination of heating system costs; and improved working conditions by the elimination of steamy, uncomfortable atmospheric conditions associated with hot alkaline cleaning methods.

Materials Handling Tray

A new tray has been added to the Nestier materials-handling line. Model No. 224 is designed to tier in rigid stacks, which permits transporting large unit loads on skids or pallets.

It is intended for handling parts not adapted to deep boxes, and is available in either cold rolled steel or aluminum. It measures 23¾ x 11 x 4¼-in. In steel it weighs 7-lbs.; in

Trays are available in aluminum or steel.

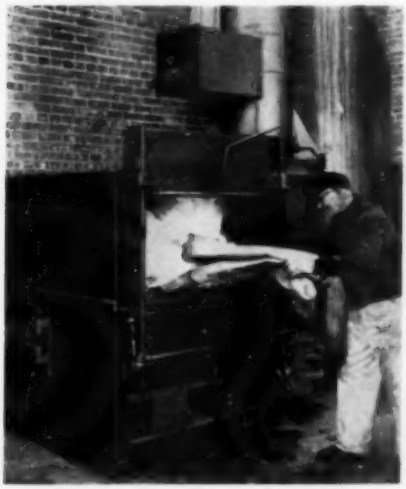
aluminum 3½-lbs. Plastic or fiberboard inserts are available.

In stacking, each tray rests on the handle of the tray below to protect contents from damage.

Further information can be had from Chas. Wm. Doepke Co., Inc., 8854 Blue Ash Rd., Rossmoyne, Ohio.

Burns Industrial Waste Safely

How to dispose of industrial waste and refuse is a problem that faces every industry. Waste accumulates in every type of plant and institution. It takes up valuable space; it's costly to have hauled away; and it's a fire hazard when burned in the open—where that can be done legally.



Burns your shop waste quickly and safely.

Consequently, those who have anything to do with operating efficiency and safety are much concerned with waste disposal. That's why incinerators are receiving so much attention, for they provide a practical solution to the problem.

The new model illustrated here is an addition to a new line of portable incinerators which are available in sizes to handle up to 450-lbs. of average waste per hour.

Added information about these safe gas-fired incinerators is contained in a new 8-page bulletin offered free by the manufacturer, Plibrico Co., 1800 Kingsbury St., Chicago 14, Ill.

Clear Strippable Coating

A transparent strippable coating of the water-white type has been developed by the Bischoff Chemical Corp., Ivoryton, Conn. It protects surfaces and edges of metal tools, parts and finished products from corrosion and abrasion during storage, handling and shipping.

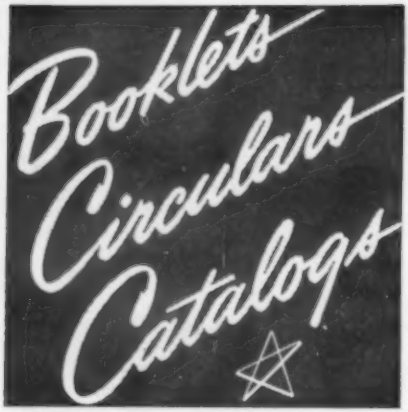
Thermo-Cote K is a butyrate base coating that permits application at 300°F. Supplied in convenient small blocks, it is melted in a thermostatically controlled melt tank and brought to the proper dipping temperature. It forms a shiny transparent, skin-tight covering for products dipped into it.

Fire Extinguisher Cart

A new mobile unit that makes fire fighting quicker and easier is announced by American - LaFrance-Foamite Corp., Elmira, N. Y.

It is a 2-wheel cart on which two or three portable fire extinguishers can be placed quickly so one man can move them easily and swiftly to a fire that is just getting started. This cart is especially useful when only the night watchman or a lone employee is at hand to send in an alarm and fight the fire.

The cart is handy also for holding these extra extinguishers for standby protection during welding or other operations that create unusual fire hazards.



Mechanical Finishing Bulletin

Hanson-Van Winkle-Munning Co., Matawan, N. J., offers a new 4-page, 2-color bulletin that describes products and equipment used for mechanical metal finishing—buffs, compositions, sisal buffs, brushes, polishing wheels, polishing and buffing lathes, and miscellaneous equipment and accessories.

Thermostatic Regulators

Bulletin S-6 is a 12-page catalog covering the Lawler Type "S" thermostatic temperature regulator just issued by Lawler Automatic Controls, Inc., 453 MacQuesten Parkway, Mt. Vernon, N. Y. The catalog explains where and when to use direct acting, reverse acting and 3-way type thermostatic temperature regulators.

Employee Safety Leaflets

"Accident Preventers," the National Safety Council's new employee training leaflets, have illustrated tips on how to stay safe on the job. They cover safe principles and practices on lifting, housekeeping, clothing and hand tools. For sample copies and quantity prices, write National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

Plant Communications System

A new 16-page, 8-color booklet on planned plant communications systems has just been released. Six basic manufacturing problems are graphically illustrated and analyzed. The importance of the proper flow of current information for efficient production as well as management control is discussed. Schematic diagrams help clarify problems in interdepartmental communications. Communications systems for materials handling, production planning, quality control, sales order and maintenance control are described.

For a free copy, write to Telautograph Corp., 16 W. 61st St., New York 23, N. Y.

Michigan Oven Catalog

The availability of a new 4-page folder on a versatile line of Standard Kiln Type Ovens for baking, heating, drying, and curing is announced by the Michigan Oven Co., 415 Brainard, Detroit 1, Mich. It provides complete information on special features, performance and available sizes. The folder explains how this Standard Oven has been specially engineered to include several "custom" features.

Metal Finishing Aid Free

A completely new 16-page bulletin featuring the famous Stevens L.V. (Laboratory-Verified) reports and how they can be used to aid metal finishing job shops or the metal finishing department in larger plants has just been released.

Copies of this booklet may be obtained by requesting it from your local Stevens office or writing direct, Frederic B. Stevens, Inc., 1800 18th St., Detroit 16, Michigan.

1954 RLM Specifications Book

The RLM Standards Institute announces that the 1954 printing of its "RLM Standard Specifications for Industrial Lighting Units" is now off the press, and that copies are available without charge to purchasing agents and industrial executives. Copies may be obtained without charge or obligation, by writing to: RLM Standards Institute, Suite 818, 236 W. Madison St., Chicago 6, Illinois.

Phosphate Coating and Vapor Degreasing

Two timely articles of considerable interest to the metal finishing trade are contained in the current issue (Vol. 2, No. 3) of Finishing Engineer, published by Metalwash Machinery Corp., 925 North Ave., Elizabeth, N. J. "What You Should Know About Vapor Degreasing" defines the process and describes its operation. "Phosphate Coating Comes of Age" is a review of the types of phosphate coating being specified by industry for the protection of metal surfaces.

Bright Beauty That Protects Your Products . . .

POLYCHROMATIC

Industrial Finishes

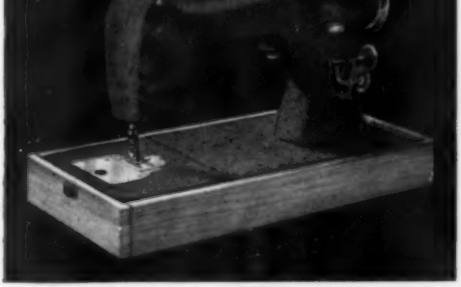
FOR METAL • PLASTICS • COMPOSITIONS • WOOD

using REYNOLDS NON-LEAFING ALUMINUM PIGMENTS

HAMMERED
Achieves the effect of ball-peening . . . gives a multi-toned texture . . . conceals minor surface defects.

REGULAR
The most iridescent polychromatic finish . . . either translucent enamel or lacquer may be used as color base.

WRINKLED
For glare-free surfaces . . . produced during short baking operation . . . opaque enamel base has good defect-hiding properties.



Specify Reynolds Aluminum Pigments for your polychromatic finishes—Regular, Hammered or Wrinkled—for consistency in color and result and constant high-quality and performance.

Reynolds patented* non-leafing aluminum pigment remains evenly dispersed as the coating sets-up. The aluminum flakes produce depth and iridescence.

Reynolds technicians will work with you and your finishes supplier to achieve the right polychromatic finish for your product.

Reynolds Metals Company, 2533 South Third Street, Louisville 1, Ky.

SEE "Mister Peepers", starring Wally Cox, Sunday nights on NBC-TV.

*U.S. PATENTS 2,309,377 AND 2,293,731; CAN. PATENT 472,686

REYNOLDS ALUMINUM

MODERN DESIGN HAS ALUMINUM FINISHES IN MIND

Sandblast Machines

A new bulletin issued by Leiman Brothers, Inc., gives full details of their improved line of standard cabinet type sandblast machines featuring a new oversize viewing glass which allows for uncramped full vision. The bulletin, number 6224, also gives information on Leiman Brothers automatic and other types of sandblast machines. For copies of this bulletin write Leiman Brothers, Inc., 146 Christie St., Newark 5, N. J.

Rust-Inhibiting Primer

The Rusticide Products Co., 3125 Perkins Ave., Cleveland 14, Ohio, offers a new brochure which describes its rust-inhibiting primer, OSPHO. This OSPHO is not a paint, but a carefully formulated metal treatment. When applied to rusted surfaces it changes iron oxide (common rust) to an inert, hard, dark grey substance. When dry, rust action is stopped and the paint coats bond so firmly to the metal surface that moisture and oxygen cannot attack the metal.

Rotoblast Bulletin Free

Pangborn Corp., Hagerstown, Md., manufacturer of blast cleaning and dust control equipment has issued a newly revised Blastmaster Rotoblast bulletin which includes information on the full line of sizes.

In addition to illustrating the various features of this high-production-rate blast machine, the bulletin No. 225 shows how production savings may be realized by using the Blastmaster for batch blast cleaning castings, forgings and heat treated parts.

Fire Hazards & Safeguards for Metalworking Industries

An illustrated book of 56 pages 8½x11-in., under the above title, reveals practical uptodate information of interest and value to executives in industry. It is a fire prevention and protection survey of plant construction, process layout and operations, including metal cleaning and metal finishing. Tells how to safeguard all operations from fire, and how to quickly extinguish a fire that does start.

IDEAL TACK RAGS
FOR A PERFECT FINISH
Bulk or Bagged
IDEAL CHEMICAL COMPANY
1499 Dean Drive, South Euclid 21, Ohio

The book is divided into ten chapters, the last one describing 37 typical fires in metal-working industries, losses ranging from $16,000 to $1,000,000.

This valuable book, containing such timely facts and recommendations, is published by The National Board of Fire Underwriters, 85 John St., New York 38, N. Y. A letter from Matthew M. Braidech, Director of Research, advises that copies will be sent free to readers of Industrial Finishing.

Impregnation of Castings

A new 8-page, 2-color brochure illustrating modern casting impregnation, is available from American Metaseal Mfg. Corp., 607 65th St., West New York, N. J.

Magnetic Separators

The Basco Mfg. Co. has issued a new bulletin covering small magnetic sheet steel separators for those manufacturers using only the lighter metals, such as many tin lithographers, light transformer manufacturers, can manufacturers, typewriter ribbon manufacturers, the canning industry, and others.

These bulletins are available from E. V. Nielsen, Inc., International Sales Agents, 129 Broad St., Stamford, Conn., or W. P. Iverson and Co., Inc., exclusive export agents, at 11 Broadway, New York 4, New York.

Clean Paint Bulletin

Whether you apply paints and finishing materials by spraying, dipping or flow coating you must use clean materials if you expect a smooth clean finish. A new 4-page illustrated bulletin entitled, "Paint Filtration" reveals new information about cleaning paint materials, solvents and air. It is especially directed to both producers and users of all kinds of industrial paint materials. Many users names are given.

For a free copy, write to Cuno Engineering Corp., Meriden, Conn., and ask for catalog No. 054.

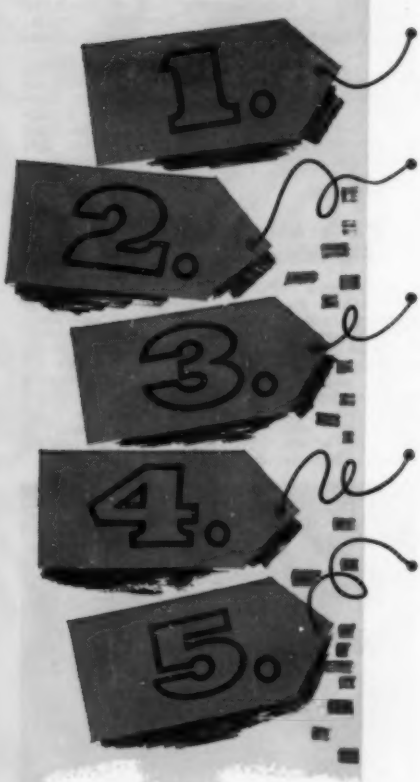
W. J. Dyber Joins MacDermid

MacDermid, Inc., Waterbury, Conn., announces the appointment of Walter J. Dyber as Technical Sales Representative in the "Berkshire Territory".

R-M Reorganizes Laboratory

Rinshed-Mason Co., Detroit, has organized and improved its Research and Development Laboratories to better take care of present and future projects.

Do your present lacquer solvents meet these Ketone advantages...?



High purity . . . *at no extra cost.* You add the latent solvents *you* prefer.

Unsurpassed ease of formulation—for both nitrocellulose and vinyl types.

Gives solutions of exceptionally high solids content—or high diluent content, both aromatic and aliphatic.

Imparts excellent flow, blush resistance, high gloss.

Price advantage, too! Lower specific gravity favors *you* when you buy by the pound and sell by the gallon.

WRITE FOR THE COMPLETE STORY!

These five important advantages are yours when you use Shell Ketones. Lacquer solvent systems based on Ketones have so many inherent advantages they have become standard with the nation's foremost formulators of both nitrocellulose and vinyl lacquers.

The Shell "quality group" of solvents includes MEK, MIBK, MIBC and IPA . . . for maximum flexibility in formulating. Ask your Shell Chemical representative why Ketones are your best solvent buy.

SHELL CHEMICAL CORPORATION

CHEMICAL PARTNER OF INDUSTRY AND AGRICULTURE

380 Madison Avenue New York 17, New York

Atlanta • Boston • Chicago • Cleveland • Detroit • Houston • Los Angeles • Newark • New York • San Francisco • St. Louis

IN CANADA: Chemical Division, Shell Oil Company of Canada, Limited • Montreal • Toronto • Vancouver

New Detrex Man in N.Y.

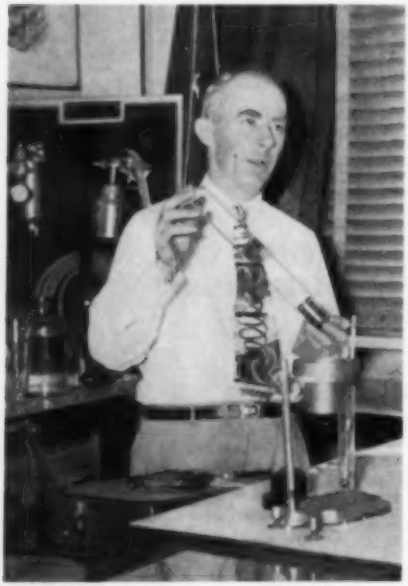
Platt K. Wiggins has been appointed sales representative to cover western New York state for the Detrex Corp.

Represent Cuno in St. Louis

Cuno Engineering announces the appointment of R. W. Hagedorn and D. M. Gannon as exclusive representatives for its line of industrial filters in the St. Louis, Missouri territory. Aside from handling Cuno, Hagedorn & Gannon are also representatives for other leading industrial manufacturers of hydraulic and pneumatic products.

W. Beacham Opens Engineering Office, Testing Lab Near Chicago

William Beacham, Research Director for leading manufacturers, and Director of a nationally known industrial training school covering Finishing Methods, Efficiency, Sales Training, etc., will concentrate his consulting activities through one central office in Crystal Lake, Ill., to permit his personal attention to all customers' production problems.



Mr. William Beacham at work in laboratory.

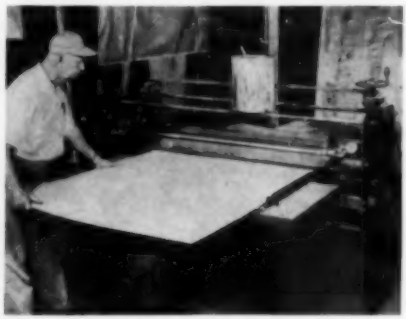
Mr. Beacham is an internationally known paint chemist and spray painting authority. He has a broad background in the finishing field, and has written numerous technical articles for various publications. For several years there has been an increasing demand for his advice in finishing methods by large manufacturers in this country and in Bankok, Siam; Havana, Cuba; Bombay, India; Copenhagen, Denmark; South Africa; Mexico; Australia; Iceland, etc.

Mr. Beacham's system differs from standard consulting methods inasmuch as he handles all manufacturing plants personally, making regular calls and working closely with management, engineering personnel and operators—and by his methods, a decided saving of finishes is shown with a steady climb of production.

Rollacoating Cuts Cost of Finishing Plywood Panels

A process for coating plywood, lumber, and other flat surfaces with sealers or finishes is described in a new "Case History Report" issued by Gasway Corp., 6463 N. Ravenswood Ave., Chicago 26, Illinois.

The report tells of savings made by a mobile home manufacturer with Rollacoating, a method of coating the base material mechanically, by feeding it through a machine that rolls the liquid finish on the work.

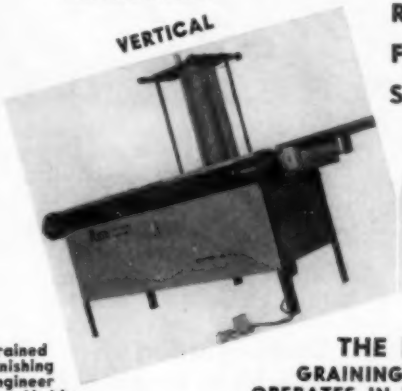


Sealer coating large plywood panels.

In this case study, the user Rollacoats a clear sealer on plywood panels as the panels are received at his plant, and then puts the panels into work or storage. This process prevents panels from being soiled or stained while being installed and so saves finishing time after final assembly. Estimated savings are 20% of finishing labor cost and 30% of sealer gallonage, plus indirect savings that result from better flow of materials and elimination of one station from the production line.

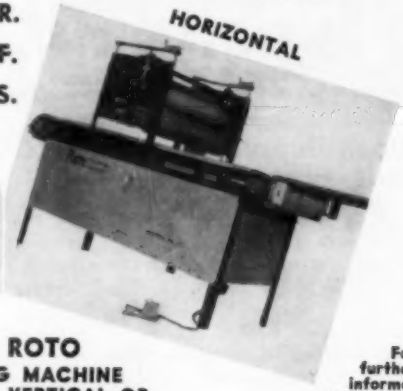
The manufacturer states that the Rollacoat process eliminates waste of finishing material and insures a controlled film thickness, so material savings up to 50% or more are possible.

ECONOMICAL VERTICAL



R. F. S.

EFFICIENT HORIZONTAL



THE ROTO GRAINING MACHINE OPERATES IN VERTICAL OR HORIZONTAL POSITION.

Trained Finishing Engineer available to supervise installation and initial finishing problems.

Wherever graining or similar patterns are required on either flat stock or complete assembled units the Roto Graining Machine is engineered to make a heretofore difficult application simple and efficient.

For further information write, wire or call Newmark 8-1778 or Normandy 5-6505

ROTO FINISHING SYSTEMS 1105 EAST GLENCOE AVENUE COMPTON, CALIFORNIA

"Organic Coating Technology"

If you are interested in authoritative information about what basic materials formulators are putting into the new finishing materials, what the characteristics and functions of each one are, how these coatings dry to become so durable and resistant, methods of preparing and testing materials before application, methods of application, and how to subject the cured coatings to various practical tests, then you will want a copy of the new 674-page book, "Organic Coating Technology" by Henry Fleming Payne, Tech. Editor for American Cyanamid Co., and a professor at the Polytechnic Institute of Brooklyn, N. Y.

"Organic Coating Technology, Volume 1," surveys the chemistry, manufacture and use of oils, resins, varnishes, high polymeric materials, plasticizers, and driers used for clear coatings, and as the vehicle or liquid portion of pigmented coatings.

The author has included a compact discussion of basic theory, sufficient to provide an understanding of many physical and chemical phenomena associated with the drying of oils, the resinous state, and the production and behavior of high polymers. However, emphasis throughout is on the practical aspects of the subject. The book contains a great many specific formulations showing actual use of materials discussed. Formulations are based on commercial materials which are referred to by their trade names for easy identification.

Here is a work which will serve as an excellent manual for all technicians in the paint industry.

Page size is 5½ plus x 9-in. Many illustrations are included—diagrams, drawings and halftone cuts; heavy stiff cloth binding in dark blue, lettered in gold; the book sells at $10.00 per copy. Copies can be obtained from *Industrial Finishing* Magazine.

MORSE VERTICAL DRUM TRUCK ROCK-A-DRUM

Picks up 55-gal. drums, rolls them over for side draining. Becomes a rugged stand on 3-in. wheels.

Morse Mfg. Co., Inc. 783 W. Manlius Street E. Syracuse, New York

Industrial FINISHING Editorial

Does Supplier's Service Suit You? Tell Him So.

★ Every supplier wants to give the finishing department all the service possible. However, service costs money. In these days of competition, rising costs of doing business, and smaller margins of profit, the supplier faces the problem of selecting those services which customers seem to want and appreciate most.

This is no easy task. Buyers in finishing departments are likely to register complaints when service proves unsatisfactory. And suppliers take such reports seriously because each one is an indication of a spot where improvement can be made.

But you can see where all this leads. Suppliers know a lot about what's wrong: unfortunately, the information is liable to be unbalanced because too few buyers of finishing supplies tell them what they find that is right! If the supplier discontinues a service or makes a change in something you liked and found desirable, it may be due to the fact that *you never mentioned it to him. And how was he supposed to know?*

Letters of complaint—as any supplier in any field can tell you—far out-number the kind that starts with these welcome words, "Here is something we admire very much about your company." Yet if the purchaser of finishing materials and supplies will be as quick to praise as to criticize, suppliers would have a far better basis for planning to please their customers.—*G.M.D.*

★ *Guest Editorial . . . Many readers can write an excellent editorial—two or three paragraphs that present a timely suggestion or valuable idea which will stimulate thought on a live subject. The Editor welcomes guest editorials and pays for those used.*

Be Open-Minded to What's New or Better

★ So often we hear a finishing materials salesman say, of a certain finishing foreman, "There's no use for me to call on him. He is sold on Blank Company's material and he just won't try any other concern's material."

That is a questionable attitude for any foreman finisher to take for several reasons. First of all, it prevents his company from trying competitive materials which might or might not be better or more economical than what he is now using. If he never tries another firm's material, how is he to know whether or not he is buying and using the best materials for his employer, at the best price. No one finishing material house has a monopoly on all of the quality materials.

Again, if or when a finishing foreman closes his mind to all except one finishing house's products, he may be refusing to learn valuable facts through experience in testing and experimenting with a few new materials. Most of the finishing material people develop new or improved products from time to time. By trying them, the foreman finisher not only becomes familiar with any new products but, also, his experimenting with

them will serve to broaden his perception and ability to grasp new ideas. And the ability to develop new ideas is a great asset to any foreman finisher in these days when the demands of industry are so complex that they tax to the limit our ability and know-how.

Finally, the foreman finisher who refuses to let at least a few other finishing material representatives demonstrate their products is, by that attitude, discouraging finishing material salesmen from calling on him or his company. He is being unfair and if there were many like him the practice would tend to stifle that healthy competition which is so vital to the economy of our country.—*H. W. C.*

Set Up Committee to Handle Abnormalities

★ Every establishment has its troubles. Rejects, errors and abnormal conditions of one kind or another show up from time to time. Management tries, of course, to see that the same mistake doesn't happen again and that any abnormal conditions are corrected. Often the exact cause of the trouble is not found. Many workers are not inclined to admit errors or to take the blame for their carelessness or their ignorance.

"Passing the buck" is a common practice. Sometimes there is covering up for a man who isn't doing his job properly. The individual who investigates plant troubles often does not have the time to get all the facts, nor does he have the authority to do much if any correcting. The investigator may hesitate to recommend any sweeping action. All of this adds up to the fact that in many plants the same mistakes occur and the same problems arise time after time and are never solved permanently.

One way to get to the heart of

REPRINTS AVAILABLE

"Industrial Paint Samples 'Big Deal'," price 10 cents per copy.

"Force Drying Wood Finishes", price 10 cents per copy.

"Cleaning and Conditioning Metal Surfaces for Coatings", price 20 cents per copy.

"The Theory and Practice of Finishing Furniture" (Five Parts), price 20 cents per copy.

"A Half Decade of Finishing Progress," price 10 cents per copy.

"Tumble Finishing," price 10 cents per copy.

"Flow Coating as a Means of Paint Application," price 10 cents per copy.

"Stirring and Straining," price 10 cents per copy.

"A Method Engineer Analyzes Paint Selling," price 10 cents per copy.

"Preparing and Painting Metal Specialties", price 10 cents per copy.

"Flock (What it is, its appearance, its uses both for utility and decoration)", price 10 cents per copy.

"Filler, The Theory and Technique of Application", price 10 cents per copy.

"Finishing System for Magnesium", price 10 cents per copy.

"Rapid Electrostatic Finishing", price 10 cents per copy.

INDUSTRIAL FINISHING Magazine

1142 N. Meridian, Indianapolis 4, Ind.

GAS-TIGHT! FOG-PROOF!
GOGGLES

PROTECT EYES AGAINST PAINT SPRAY, dust, fumes, gas, smoke, etc. Can be worn with any make respirator or mask. Soft, pliable rubber frames give air-tight fit on any shape face. A few drops of water on inside of lenses keep fog off by a simple nod or shake of head. Sample $2.00 postpaid! Order today!

H. S. COVER, South Bend, Indiana

SOLVENTS RECOVERED BY
THE LOFGREN PROCESS

We RECOVER YOUR
SOLVENTS & THINNERS

From Wash Thinners - Spoilt Lacquers - Degreasing Machine Sludge, etc.

Each customer's shipment, whether one drum or a carload, receives PROPER AND SEPARATE TREATMENT. Write to:

SOLVENTS RECOVERY SERVICE, INC.
1025 Broad St., Newark 2, N. J.

OR

HAMMOND SOLVENTS RECOVERY SERVICE
241 Brunswick St., Hammond, Ind.

CVC QUALITY Casket Finishes

Write for samples

PRIMERS—Excellent adhesion, less sanding.
LACQUERS—Easy rubbing, polishing.

Quality Custom Finishes Since 1865

CINCINNATI VARNISH CO.
CINCINNATI 12, OHIO

Nat'l. Chemical & Plastics Co. Featured in "Oilways" Article

The National Chemical & Plastics Co. of Baltimore, Maryland, manufacturer of the NCP line of quality lacquers, has been selected by the Esso Standard Oil Co. for special editorial consideration in its magazine "Oilways." A 4-page illustrated article beginning on page 1 of the magazine, October issue, tells the story of National's products and production.

problems, particularly in plants where liaison is a problem, is to set up an "abnormality committee". This small group, usually composed of men from different departments, gets together periodically and goes over any abnormalities that have occurred recently, and seeks a permanent solution. An abnormality, for this purpose, might be defined as any unusual event or circumstance which costs the company money.

A committee of this type will have more facts and viewpoints at its disposal than any one individual. The same problem might have different aspects when seen by a salesman, foreman, shipping clerk or engineer, as compared to the front office view.

By having more than one department represented there is less likelihood of "stepping on toes" when making a decision; and there is more authority behind that decision. As a byproduct the committee members will get valuable information from the discussions; this will increase their knowledge of the company's operations, and will usually aid them in their own work.—*E. V. Goldstein.*

Magnuson Adds New Personnel

Magnuson Products Corp. (Cleaning Compounds), has designated Harry R. Johnson as its representative in the Chicago area; and Wayne J. Streavig to cover territory from Allentown, Pa., to Baltimore, Md.

Want Better Service? Change Your Habits

★ The customer who buys sizable quantities of paint materials seldom has any trouble getting service from paint companies. The one who sometimes wonders "why service is so poor" is usually the customer that buys in small quantities. It is these smaller customers who often need the most service, as they seldom have the practical knowledge about finishes and finishing methods that the larger customers have.

The owner-manager of one small concern that uses finishing materials expressed his feelings this way: "I've bought from a number of companies and not one of them seems to be willing to go out of its way for me at all."

An examination of this particular firm's situation shows why it received "poor service." Actually the company got comparatively good service from many of its paint suppliers, who made little if any profit from said company's purchases.

The paint business is quite competitive and paint companies have to give reasonably good service to hold an account. Usually they make every reasonable effort to be helpful. However, if demands for service, in relation to sales volume, are so great that the paint company continually loses money on the account, then something has to be done. That something may take the form of a raise in prices, a cut-down in service, switching the customer to stock items, or informing the customer that this company would rather not bother with small accounts.

The paint user mentioned above uses a variety of finishes and he buys from six or seven companies—wherever he can get the lowest price. His orders range from 5 to 30 gallons of any particular finish; no one paint company gets enough business from him to consider his business of much value. No paint company can afford to give his problems much attention, especially when more profitable customers have problems waiting to be solved.

This paint user could get much better service if he patronized only one or two companies. Then he would be buying enough from a supplier to be considered a fairly good customer—that is if he picked the right supplier.

Paint companies differ as to what they consider a worthwhile order. One large company considers any order less than 300 gallons as of not much value. Another concern is not particularly interested in customers who buy less than a drum of material at a time. A third company feels that it makes some profit from orders as small as 20 or 25 gallons. Obviously the small user should buy, if possible,

PAINT TESTING LABORATORY
Any test in F. S. TT-P-141b
PENNIMAN & BROWNE, INC.
Chemists-Engineers-Inspectors
341 St. Paul Place-Baltimore 2, Md.

Internationally
Known Research Chemist &
Spray Painting Authority
at your service
WILLIAM BEACHAM
Finishing Consultant
CRYSTAL LAKE, ILLINOIS
Phone C. L. 1302-M-2

from a company that considers his small volume as worthwhile business.

The paint user mentioned at the beginning of this article orders 15 gallons of an enamel every two weeks or so, instead of ordering say 60 gallons which would last about two months. Consequently his supplier is repeatedly producing small batches of material for him. The materials he orders, like most industrial finishes, are made to order. Inasmuch as there is as much paper work, testing, shading, etc., for 15 gallons as for 1000 gallons, it is easy to see why the paint company makes little profit (or may be actually losing money) on these 15-gallon orders. On a larger order the company could make a profit.

Often the selling price has to be raised on small orders. It may cost a company $10, $20, $50 or even more to make up a one-gallon batch of paint. It cannot possibly break even at any reasonable price.

To sum it up: If you are using small quantities of industrial finishes and want better service, make it a point to deal principally with one or two paint manufacturers who are interested in this small business. Secondly, arrange your buying habits so that the paint company you patronize can make a profit (as it should). Self-interest will prompt that company to give you as much service as possible. —*E.V.G.*

A Company's Strength Is In Its Men

★ The chief chemist of a paint company was asked if he considered his formulas to be the most valuable part of his laboratory.

"No", he replied. "With time and effort most paint companies could duplicate the great majority of our formulas, if not all of them. The strength of this lab", he continued, "is in its men, not in its formulas".

Thinking over his statement I believe it applies to companies as well as to laboratories. *The strength of a company is in its men—in their judgment, experience, effort and loyalty.*

Often it is quite a problem to replace a capable man with one of equal ability. Sometimes, however, the reverse is true. An example that comes to mind is the experience of a company using a hammer finish. They had continual trouble getting a hammer pattern of reasonable uniformity, and were considering switching to a finish easier to control and apply.

About this time their sprayman happened to quit. Well, with the arrival of a new sprayman most of their pattern troubles disappeared. When two men are doing the same kind of work it is quite natural to find that one does considerably more work or considerably better work than the other.

The problem of keeping production going efficiently is especially severe when a company changes its location. Usually a number of employees do not move with the company, so they must be replaced. The new men may not have experience with the particular problems of the company. It may take months or even years for the organization to regain its former efficiency.

A company may find that, because of poor hiring policies, a low wage scale, bad working conditions, or other reasons, its workers are not doing a good job. This may be the fault of the employer or of the employees, depending on the individual case. As competition gets tougher and the days of easy selling fade into history, it is up to management to keep production efficiency high and to increase it if possible. This cannot be done with a second rate working force.—*E. V. Goldstein.*

How Your Supplier's Representative May Help

The supplier of materials and services is one of the biggest assets any firm has. A reputable supplier is interested in selling his materials at a profit, but not at the expense of any loss or inconvenience to his customers.

An example of this occurred recently when the service representative of a paint firm called on a manufacturer of metal products. In looking over the finishing room he noticed they were running one of the products through an automatic spray machine twice in order to properly coat a slightly raised flange.

After some discussion in the laboratory, a paint heater was recommended to be included in the line; the formulation of enamel was changed; and a new viscosity level established.

Results: One trip through the automatic spray machine was sufficient to properly coat the product, including the raised flange.

Now this did not result in the paint firm selling this manufacturer less enamel. In fact the volume was increased slightly, due to stepped up production. Service representatives often are able to solve finishing problems and make valuable suggestions on methods and equipment, as well as on coating materials.

This should be construed to mean that the paint firm is operating a free finish engineering service, always ready at the beck and call of the customer. Each plant should have some one capable of analyzing various problems as they arise. If the trouble is being caused by some material other than paint, the particular supplier should be called in. If methods and equipment are involved, a finishing engineer will be able to solve the difficulty. Whether it be materials or services, faith in your supplier is of utmost importance.

Airless Spray Painting Clinic

More than 100 Connecticut industrialists and representatives of paint manufacturers attended a "Bede Airless Spray Painting Clinic" on Sept. 23 and 24, sponsored by The Lea Mfg. Co., Waterbury, Conn., distributors for Bede Industrial Products Corp., Cleveland, Ohio, developer and manufacturer of the new "Airless Painting" process and equipment.

Demonstrating the excellent performance of Bede's airless spray painting equipment.

Mr. James Frier, Jr., and Frank Ziroe, representing Bede, both gave informative talks on the principles and merits of "Airless Spray Painting" in industrial finishing. Their talks were followed by an actual spraying demonstration with the Bede Airless Unit. A number of products were airless painted to prove the effectiveness of this new development.

The Lea Mfg. Co. also exhibited the regular line of Bede paint heaters, used quite extensively by the finishing industry as standard equipment.

The Lea Mfg. Co. is fully staffed to offer engineering, plant layout and technical service on spray finishing problems, as well as other surface finishing problems involving the use of abrasive compositions or electro-chemical processes.

Leo Buchine Joins I.W.M. Corp.

Leo Buchine has been appointed vice-president and general manager in charge of manufacturing at the Industrial Washing Machine Corp., Matawan, N. J., manufacturer of specially designed machines for cleaning metals and other products.

Utilize Higher Ability Of Alert Workers

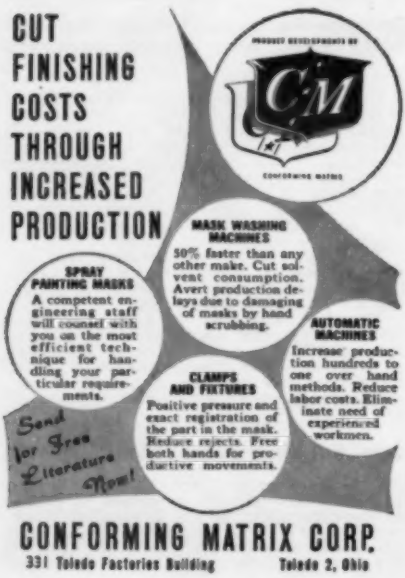
★ American industry faces a monumental task in its efforts to combat the waste of mental resources of its working men and women. Despite the fact that only a small portion of America's population has had the advantage of higher education, fully half of the population is capable of success in a college or university curriculum.

Dr. Eleroy L. Stromber, manager of training and personnel research for The B. F. Goodrich Company, Akron, O., terms this waste an appalling misuse of "brain power." Speaking before delegates at the opening session of the Ohio State Safety Conference in Cleveland recently, Dr. Stromberg said that "the failure to train those who are mentally capable to assume responsibility for management, inventiveness, leadership and science, is certainly a waste of brain power."

"It is logical to assume," he said, "that most industrial organizations have upon their rolls individuals with tremendous mental reserves which have never been tapped because of a pre-determined policy pointing to a college diploma as a prerequisite for creative thinking and problem solving.

"It is certain that among the men and women who constitute industry's physical manpower resources, there are many who, if given the opportunity, could demonstrate that they are able to carry out many assignments now classified as jobs for college graduates. This waste of brain power is one of the great detriments from which industrial management needs to free itself by recognizing that maturity, experience, and growing knowledge exist in every man and not alone in the college graduate."

The B. F. Goodrich psychologist recommended that industry take steps to better utilize the mental abilities of its men and women who have not been fortunate enough to graduate from college. One way to do this would be to reexamine the requirements of the man who has a certain job. It may turn out that this man, and countless others like him, requires more of a challenging job to keep him happy and productive, whereas the fractionated, simplified task may leave him bored, disinterested, and anxious to move.—*B. F. Goodrich Co.*


CUT FINISHING COSTS THROUGH INCREASED PRODUCTION
C-M
MASK WASHING MACHINES
50% faster than any other make. Cut solvent consumption. Avert production delays due to damaging of masks by hand scrubbing.
SPRAY PAINTING MASKS
A competent engineering staff will counsel with you on the most efficient technique for handling your particular requirements.
AUTOMATIC MACHINES
Increase production hundreds to one over hand methods. Reduce labor costs. Eliminate need of experienced workmen.
CLAMPS AND FIXTURES
Positive pressure and exact registration of the part in the mask. Reduce rejects. Free both hands for productive movements.
Send for Free Literature Now!
CONFORMING MATRIX CORP.
331 Toledo Factories Building
Toledo 2, Ohio

Langdon Waterman Joins I-Sis

I-Sis Chemicals, Inc., Springdale, Conn., announces the appointment of Mr. Langdon Waterman as sales engineer in New England, covering southern Maine and New Hampshire, and Eastern Massachusetts and Rhode Island. Mr. Waterman has had 15 years' experience with a nationally known chemical company at its Boston plant.

Fast Dry Touch-up for Any Color Wrinkle

IT HAS BEEN a headache to many a paint foreman when he has been given a small amount of wrinkle paint to finish a sample and, when his sample is finished, find a small spot on the article in need of touching up and not have a fast drying paint to touch up the spots. I have found a solution to this problem as follows:

In a small container, place three parts of the wrinkle paint that was used to spray the sample. This will give the color needed to match the color on the sample. To this add one part of acetone and stir well, breaking down the oils and resins which are found in the wrinkle paint; to this add one-half part lacquer thinner and again stir well. Then add one part of clear gloss lacquer and stir. Clear gloss lacquer is required because it will give a better blend and hardness between wrinkle and touch-up paint.

In touching up the thin or skipped places, confine paint to only those areas needed with a small paint brush. A 10-minute bake at 250° F. will hasten the drying and setting of your touch-up paint.

Insofar as I know, I am the one who developed this procedure—or, if not, it could be a coincident, as I stumbled onto it while painting samples of our product years ago, and it has worked out very satisfactorily in all cases.

For this reason I would like to pass this information on to other paint foremen

The Label of Distinction
seen in
Distinctive Finishing Rooms!

. . . for tops in quality and complete satisfaction

"Paint & Relax with TENAX"

TENAX FINISHING PRODUCTS CO.
NEWARK, N. J.

in the field, in the hope that at some time they may find a use for it.

Be it known that all wrinkle paints are not of the same nature in viscosity and formulation, and for this reason it may become necessary for a man to do some experimenting before applying touch-up paint to an original sample.—*Ray Kling, Paint Foreman, Hawley Products Co. (Molded fibre products.)*

Frohberg, new V.P. of R-M. Co.

Lyle E. Frohberg's appointment as vice president in charge of sales has been announced by the Rinshed-Mason Co. of Detroit. Rinshed-Mason nationally markets a line of automotive and industrial finishes, and has plant installations in Anaheim, California and Windsor, Ontario, Canada.

Industrial Vacuum Cleaners

Two new vacuum cleaners—a large capacity heavy duty portable wet-dry pick-up machine and a heavy duty quiet-type vacuum for use wherever quiet operation is important—have been introduced by the Clarke Sanding Machine Co., Muskegon, Michigan.

ATTENTION: SALESMEN!

DO YOU HAVE EXPERIENCE in the sale of Industrial Coating Finishes in the New York, New Jersey and adjacent area?

ARE YOU SATISFIED with your present opportunities?

If you answer YES and NO, tell us about it, in confidence, of course; we can be helpful.

We make a full line of Coating-Synthetics, Oleoresinous Lacquers of the conventional and special types PLUS a specialty product that offers unlimited sales possibilities. It is used on Wood, Metal, Pressed Board or any other material used in Industrial Product manufacturing.

We are interested in an ambitious, conscientious man who wants to go places. We pay salary, expenses, and bonuses.

A brief summary of your career is required. Be assured of absolute confidential treatment by a recognized long established manufacturer. Address IF-274, care Industrial Finishing.

CLASSIFIED ADVERTISING

The rate on ads appearing in this department is $1.00 per line of 6-pt. light face type, per insertion. Minimum charge, $5.00. Ads set in 8-pt. extra bold face type cost $2.00 per line, per insertion.

SALES POSITION WANTED.

Aggressive, resourceful salesman, 12 years' experience selling industrial paints and protective coatings in greater New York area, seeks opportunity with progressive industrial finishes manufacturer. Age 35. Married. College. Address IF-268, care Industrial Finishing Magazine.

SALES REPRESENTATIVE.

Experienced, to handle complete line of lacquer products of a quality lacquer manufacturer. Excellent opportunity for live wire. Our personnel know of this opening. Address IF-206, care Industrial Finishing.

PLATING SUPERVISOR WANTED.

Technical man, capable of supervising plating of copper, nickel, chrome and bright brass. Some knowledge of oxidizing, lacquering and buffing essential. Location progressive Southeastern city. Salary open. Excellent opportunity for right man. In reply, give full details of technical background and experience. Address IF-267, care Industrial Finishing.

SERVICEMAN WANTED.

An established wood and metal finish house has an opening on its service staff and is looking for an experienced wood furniture finisher. Some metal finish background would be helpful.

Please advise in first letter past ten-year connections. Length of service at each, giving name of person we may address letter of recommendation.

Advise what starting salary would be interesting. Address IF-259, care Industrial Finishing.

SALESMAN WANTED.

Manufacturer of Lacquer and Industrial Finishes on East Coast in midst of expasion program. Several territories open for right men. Well equipped lab and plant facilities back up our salesmen. Write stating experience and territory interested in. All replies held in strictest confidence. Address IF-269, care Industrial Finishing.

SALESMAN WANTED

By manufacturer exclusively industrial finishes. Outstanding, successful salesman for Chicago and central west area. Should be of calibre to merit starting salary $15,000 per year. Position offers much greater earning potential. Only men of proven record will qualify for consideration. State background in detail. All replies confidential. Address IF-273, care Industrial Finishing.

TWO OPENINGS IN INDUSTRIAL FINISHES SALES.

One for an experienced man to build on established sales in Pennsylvania, Ohio and Western New York. Another opening for a chemist interested in sales to handle new product development and customer service from our home office. We are moving into a completely new and larger plant after 25 years in the industrial and specialty coatings field. Apply to RAFFI AND SWANSON, INC., 311 Eastern Avenue, Chelsea 50, Massachusetts.

WE NEED A REPRESENTATIVE

We make a nationally accepted line of chemically resistant synthetics—metal decorative coatings and can lacquers, in addition to a complete line of product finishes. As a prominent company in the field, we specialize in custom formulations—have completely equipped laboratories and a most up-to-date factory.

A Midwest territory is now open for the right technical sales representative.

All of our organization is familiar with this ad. Write for an interview.

Address IF-272, care Industrial Finishing, Indianapolis 4, Ind.

WANTED: SALES MANAGER

Somewhere in the area between the Alleghenies and the Mississippi, there is a man that will recognize this add as a golden opportunity. He may now be a Sales Manager, an Assistant Sales Manager, a Technical Correspondent or a successful Salesman of Industrial Organic Coatings. He is under fifty, a hard and tireless worker, with a technical background and a definite sales outlook on life. He has had intimate contact with a wide variety of finishing problems and knows that Industrial Sales are built on personal contacts. He has been successful in his job, but is looking for broader horizons. He has contacts that he can convert into substantial business, either personally or through other salesmen who believe in him.

If you fit the above description, write in complete confidence about your background, personality, experience and ability to the President of a well established, strictly industrial company, located in the Ohio River Valley, who desires to establish a separate Metal Finishes Sales Department and is looking for the right man to initiate and carry out ideas that will result in volume sales. Complete and adequate laboratory and manufacturing facilities available. Broad and liberal insurance, hospitalization, medical care and retirement plans now in effect. Income practically unlimited, based solely on results.

Address IF-271, care INDUSTRIAL FINISHING, Indianapolis 4, Ind.

SALESMEN WANTED.

Experienced salesmen selling lacquer and synthetic finishes. Good opportunity, open territory, good laboratory cooperation. Factory in Newark area. Apply in detail. Address IF-207, care Industrial Finishing.

WANTED.

Line of automotive lacquers and enamels for export. Good possibilities. Address IF-270, care Industrial Finishing.

SERVICES AVAILABLE.

Industrial Paint Manufacturer, long-established, well-rated, calling on Connecticut manufacturers would like to contact manufacturer with idea of selling, warehousing, distributing and servicing your product. Send inquiries to BRISTOL LACQUER & CHEMICAL CO., Forestville, Connecticut.

WANTED REPRESENTATIVES

Reliance Varnish Company of Louisville, Kentucky, is seeking the services of industrial salesmen to represent them in central and northern Ohio and Indiana.

We are pioneers in Wrinkle, Flow-Coating, Dipping and Appliance finishes. The men who join us will be backed by excellent laboratory, production and technical service facilities.

The right man will more or less write his own "ticket" as to complete draw, but only experienced men will be considered.

A personal and confidential interview held at our expense is most desirable. Please address replies to Ben Robertson, Jr., Reliance Varnish Company, Louisville 9, Kentucky, telephone Franklin 3585.

WANTED TO BUY.

Will buy your dirty Thinners and Solvents. Send samples or letters giving approximate contents and solids. Address THE JOHANN CO., 8547 S. Ashland Ave., Chicago, Ill.

SOLVENT CLEANING SERVICE.

Dirty lacquer solvent can be shipped to us for distillation and returned to you clean and ready for use. Within 200 mile radius of Louisville a substantial economy can be realized. Cost runs from 14c to 19c per gallon. KENTUCKY COLOR & CHEMICAL CO., 600 N. 34th St., Louisville 12, Ky.

FOR SALE.

Two furniture printing machines using 20x38-in. composition rollers, one edge printing machine, all in good condition. Good buy. CAMDEN FURNITURE CO., Camden, Arkansas.

FOR SALE.

One brand new Rutherford Machinery hand-operated 14-in. laboratory coater machine. Can be used for single or double coater. Very reasonable. Inquire AMERICAN VENETIAN CORP., Haskell, N. J. Geneva 8-4467.

FOR SALE.

15-gallon DeVilbiss Material Pressure Tank. Complete.
5-gallon DeVilbiss Material Pressure Tank. Complete. Air Motor.
Bede Hot Lacquer Machine with pump, air motor and heater.
Curtis BB water cooled air compressor 5-HP. BB 25-CFM. Complete.
4 Wilcox Overhead chain-type conveyor systems with dry ovens.
Heller carton stapler.
2 Aro ¾-in. heavy duty air drills, type 22PDZ.
4 Aro air screw drivers. Adjustable clutch type 22PAH.
National single-pad air sander and rubbing machine.
Air motor for mixing filler, DeVilbiss.
36 Industrial 2-bulb 48-in. fluorescent lights with bulbs.
12-in. sawdust blower system with pipe and 2-HP. BB motor.
24-in. sawdust blower system with pipe and 10-HP. motor & cyclone.
Complete Buss duct industrial type wiring system & fuse boxes.
V. J. RIDER, JR., Monticello Novelty Co., Inc., Flora, Indiana.

FORD CUPS
THE VOL-U-METER COMPANY
Buffalo 16, N. Y.

INDEX *to Advertisers*

Agate Lacquer Mfg. Co. 95
Allied Finishing Specialties Co. 101
American Richwood Products Co. 39
Arco Co., The 83
Armitage & Co., John L. 1
Atlas Powder Co. 16
Atlas Silk Screen Supply Co. 96

Barrett Varnish Co. 87
Beacham, William 119
Benjamin Franklin Pt. & Varn. Co. 11
Better Finishes & Coatings, Inc. 22
Bond Chemical Products Co. 102
Burdett Mfg. Co. 33

Carolina Paint & Varnish Works 11
Cellusuede Products, Inc. 48
Cincinnati Cleaning & Finishing Machinery Co., Inc. 10
Cincinnati Varnish Co. 118
Claremont Waste Mfg. Co. 49
Classified Advertising 124—125—126
Conforming Matrix Corp. 122
Cover, H. S. 118
Cuno Engineering Corp. 59

Day & Co., James B. 67
DeBurgh Conveyors, Inc. 46
DeSoto Paint & Varnish Co. 11
Despatch Oven Co. 12
Detro Mfg. & Sales Co., Inc. 39
DeVilbiss Co., The 72-73
Dolan & Co., V. J. 5
DuBois & Co., Inc., The 6
DuPont de Nemours & Co., E. I. 64-65
Duralac Chemical Corp. 100

Eclipse Air Brush Co. Fourth Cover
Egyptian Lacquer Mfg. Co., The 24
Ell-Bee Chemical Co. 105
Enthone, Inc. 31
Erikson Mfg. Co. 75

Ferbert-Schorndorfer Co. 79
Fostoria Pressed Steel Corp. 128

Gardner Laboratory 106
Glidden Co., The 18-19
Grand Rapids Varnish Corp. 2

Hammond Solvents Recovery Service 118

Ideal Chemical Co. 112
Illinois Paint Works 11
Industrial Ovens, Inc. 52
Interchemical Corp. Second Cover
I-Sis Chemicals, Inc. 8

Jamestown Finishing Products, Inc. 71

Koch Sons, Inc., George 17

Lanly Co., The 35
Lawrence-McFadden Co. 85
Lilly Varnish Co. Front Cover

Maas & Waldstein Co. 99
Morse Mfg. Co. 115

National Affiliates 11
National Air Sander, Inc. 20
National Chemical & Plastics Co. 13
Neilson Chemical Co. 37
Newcomb-Detroit Co. 54
New York Woodfinishers Supply Co. 107
Nikolas & Co., G. J. 29
Northwest Chemical Co. 55
Nox-Rust Chemical Corp. 38

Oakite Products, Inc. 36
O'Brien Corp. 63
Oxford Corporation 91

Pacific Paint & Varnish Co. 11
Penniman & Browne, Inc. 119
Perfection Paint & Color Co. 45

Randolph Products Co. 96
Ransburg Electro-Coating Corp. 57
Reliance Varnish Co. Third Cover
Reynolds Metals Co. 111
Rockford Varnish Co. 47
Ross Engineering Corp., J. O. 25
Roto Finishing Systems 115

Sander Corp., The Monroe 93
Schwartz Chemical Co., The 7
Shell Chemical Co. 113
Sherwin-Williams Co., The 14-15
Snyder Bros. Co. 77
Solvents & Chemicals Group, Inc. 43
Solvents Recovery Service, Inc. 118
South Florida Test Service 101
Spee-Flo Corp., The 61
Sprayon Products, Inc. 69
Spruance Co., The Gilbert 21
Syer, C. Raymond 106

Tenax Finishing Products Co. 123
Tousey Varnish Co. 9

United Chromium, Inc. 89
United Lacquer Mfg. Co. 81

Varnish Products Co. 94
Vol-U-Meter Co. 97-126

Wendell Mfg. Co. 95

Young Brothers Co. 33

HIGH SPEED BAKING

3 TO 10 MINUTE TIME—AUTOMATIC CONTROL

In the "world's most modern refrigerator plant," The Hotpoint Co., Chicago, Ill., uses this compact "J" shaped Fostoria Infra-red oven to dry vitreous enamel ground coat on refrigerator inner liners. Total heat zone time is 3¼ minutes. Operating load is 450 KW. Production rate is 140-160 liners per hour.

Profit WITH MODERN FOSTORIA OVENS

ALL THESE ADVANTAGES

FASTER CYCLES
Fastest heat transfer. Greatest output to input. Instant action.

LESS SPACE
Most production for oven size. May be ceiling mounted.

CLEAN OPERATION
No by-products of combustion. No condensation.

UNIFORM BAKE
Evenray heat distribution with thorough penetration.

FLEXIBILITY
Adaptable to any material, any shape, any color. Infinitely variable heat levels.

SAFETY CONTROLLED
No warm-up, no shut-off lag. Instant heat control.

LESS MAINTENANCE
Lowest source replacement cost. Least efficiency loss.

HIGHEST EFFICIENCY
Less than 2% energy loss. Heats product—not oven walls.

CUTS COSTS
Lowest "per piece" production cost. Competitive initial cost.

RELIABILITY
Foremost engineering "know-how" and service.

Greater production efficiency is the keynote for the competitive era ahead. New methods, new modern equipment are vital to reduce man-hours, lower production costs, increase sales demand. For baking and drying operations, the modern Fostoria Infra-red Oven provides an array of cost-saving, quality-improving advantages. By far the most efficient of all industrial ovens, as thoroughly proved in over 7,000 plants, Fostoria gives the most productive output to energy input, PLUS the greatest production in the least space, PLUS the fastest time cycle, PLUS automatic control. For lowest "per piece" production cost, for finest quality baking, for the competitive efficiency of your plant, compare your present equipment. The expert on-the-job assistance of a Fostoria field engineer is promptly available to you without obligation.

THE FOSTORIA PRESSED STEEL CORP., FOSTORIA, O., Dept. I

Send For Complete Facts

Write for this brochure of technical facts and case histories of many Fostoria oven installations. Tell us your particular problem and we will include data directly applicable to your operation.

INFRA-RED fostoria OVENS

Are you considering

FLOW COATING

your product

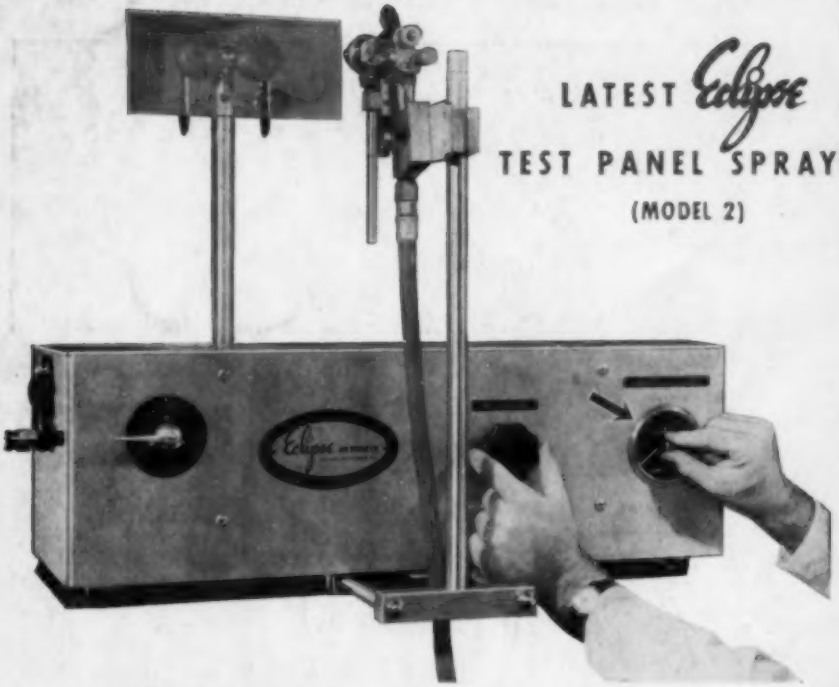
?

Rely on Reliance

...if so

Why not use our PILOT PLANT and formulating ability, to see if this method is "right" for your product? We would welcome the opportunity of helping you as we have others.

RELIANCE VARNISH COMPANY
Incorporated
LOUISVILLE, KY.
Affiliated Factories In
CHICAGO, ILL.
ASHEVILLE, N. C.



LATEST *Eclipse*

TEST PANEL SPRAYER

(MODEL 2)

insures accurate color matching

ACCURATE DUPLICATION—Standardizes application to test panels; eliminates variation in hand spraying techniques. FLEXIBLE—Holds *any* standard spray gun; handles panels of any material up to 12″ x 14″; simulates manual and automatic production spraying; lapping attachment available. EASY TO OPERATE———Rheostat type speed control directly indicated on dial with static hand. NEW LOW COST—Improved design permits reduction to $465.

---

send for folder today

Eclipse Air Brush Co.
400 Park Ave.
Newark 7, N. J.

Send panel sprayer literature

Name .....

Company .....

Street .....

City & State .....